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American Bee Keepers' Convention.

FIRST DAY'S PROCEEDINGS.

Various States of the Union, either singly or two or three of them united, have formed bee-keepers' associations, but hitherto no national association has existed in this country. The impetus given to bee culture by the discoveries of Huber, the distinguished Geneva apiarian, at the close of the last century, has sent hundreds into that pursuit. The progress of skill and knowledge in it has not lagged behind the advance made by science and skill in other departments of knowledge and industry since the blind Huber died. The necessity of associated action and effort for the benefit of bee culture has been widely felt, and that feeling has been manifested in forming numerous local associations. About a year ago two of these associations, at nearly the same time, conceived the idea of issuing a call for a convention to form a national organization. One of them was the Michigan, the other the Northeastern Bee Keepers' Association. The North American Bee Keepers' Association, organized at Indianapolis last December, and the American Bee Keepers' Association, organized here yesterday, are the results of calls issued by the above local bodies respectively, viz.: the Michigan and the Northeastern. Between the Michigan and the Northeastern there has been some controversy—with but little, if any, ill feeling—as to the claim of priority in issuing the call for the national convention. The convention called by the Michigan Association met in December last; that called by the Northeastern Association is the one in session now in this city. Two national organizations have grown out of the enterprise of the two above named local organizations. Both associations have the same man, the Rev. L. L. Langstroth, of Oxford, for President. Many members of the association formed yesterday are members of the Northwestern formed at Indianapolis. Mr. Langstroth, of the Michigan body, in refiring from the active duties of the chair last evening, called to officiate as Chairman of the American, the Rev. Mr. Van Slyke, of the Northeastern Association. It will be seen by reading the proceedings of the meeting of delegates yesterday (printed below,) that the union of the two national associations at their next meeting, which, for both, is at the same time and place, is a moral certainty.

AFTERNOON SESSION.

About one hundred and fifty delegates from various States assembled in convention at one o'clock, yesterday afternoon, at the Templar's Hall, No. 160 Elm street, in this city. An organization was effected by electing Rev. Wm. L. Clarke, of Toronto, Chairman.

Gen. D. L. Adair, of Kentucky, moved to adopt a constitution, which he presented, and make this convention an association, to be known as the American Bee Keepers' Association.

This was objected to as needless, since we have already a North American Bee Keepers' Association. Mr. H. A. King, of New York, favored General Adair's motion. This would be the first step toward uniting the North American Association and the one proposed to organize here.

Dr. Bohrer, of Indiana, a delegate to the convention that met at Indianapolis, December 21, 1870, spoke in favor of maintaining good feeling. He desired that there should be but one association—*i. e.*, the North American or the American, as should be agreed.

Mr. R C. Otis, of Wisconsin, moved, as an amendment to Gen. Adair's motion, to appoint a committee to negotiate for union with a like committee of the North American Bee Keepers' Association.

Mr. H. A. King, of New York, moved to amend the amendment, that the convention should first organize by adopting a constitution, and then propose a union.

By carrying the previous question, the debate was cut off.

Mr. King's amendment to Mr. Otis' amendment was adopted.

The convention avoided the parliamentary form of adopting the amendment of Mr. Otis as amended, and proceeded with the constitution.

There was first a free debate upon the question of adopting a constitution, in which many quite original views were presented, both upon parliamentary usage, and the propriety of forming an association here.

The constitution was adopted article by article.

A motion was made to insert in article 4, "bee-

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keeper" instead of "person," as eligible to membership in the association, and lost.

One of the delegates wanted the word "person" retained. He wanted the number of bee keepers increased.

Mrs. Tupper, of Brighton, Iowa, said some persons who were not bee keepers wanted to become such.

The following is the

Constitution.

ARTICLE 1. This association shall be known as the American Bee Keepers' Association, and shall meet annually. Its objects shall be to promote the interests of bee culture.

ART. 2. The officers of this association shall be a President and Vice-President from each State, Territory and province represented; a Secretary, two Assistant Secretaries, and Treasurer, whose duties shall be those usually performed by such officers, who shall be elected by ballot, and hold their offices for one year, or until their successors shall be elected.

ART. 3. The President, Secretaries and Treasurer shall constitute an Executive Committee.

ART. 4. Any person may become a member by giving his or her name to the Secretary.

ART. 5. This association may, from time to time, elect suitable persons as honorary members.

ART. 6. No member shall be entitled to the floor more than five minutes in the discussion of any motion, resolution or petition without the consent of the association.

ART. 7. All committees shall be elected by plurality vote, except by special resolution.

ART. 8. This constitution may be amended at any annual meeting, by a two-thirds vote of all the members in attendance.

The usual formality of adopting the constitution as a whole was dispensed with.

A committee of five was appointed to go around the room and obtain signers to the constitution.

Election of Officers.

After the committee had gone around and obtained names the association went into the election of officers.

Mr. King, of New York, nominated Mr. L. L. Langstroth, of Oxford, Ohio, for the office of President. There were no opposing candidates. The Rev. L. L. Langstroth was, upon ballot, elected unanimously.

Mr. Langstroth said that as a compliment he would accept the position, but only on the condition that none of the active duties of the office devolve upon him, as his health would not allow him to undertake them. The convention signified its unanimous consent.

Balloting for Secretary was declared next in order. Nominations were made and the ballots taken as follows: D. L. Adair, of Kentucky; H. A. King, of New York; W. E. Ladd, Newport, Ky.; H. W. Stevenson, of Cincinnati. The Rev. H. A. King, of New York, was elected Secretary on the first ballot. The ballots for each candidate were not read.

Vice Presidents.

Vice Presidents were chosen as follows from all the States represented: New York, the Rev. E. Van Slyke; Kentucky, H. Nesbit; Missouri, L. C. Waite; Iowa, Mrs. E. S. Tupper; Wisconsin, A. H. Harte; Illinois, L. C. Francis; Ontario, Canada, the Rev. W. L. Clark; New Jersey, E. J. Peck; Pennsylvania, Seth Hoagland; Ohio, A. Benedict; Tennessee, Dr. T. B. Hamlin; Kansas, L. J. Dallas; Minnesota, A. D. Seward; Michigan, A. S. Moon; Indiana, Dr. John F. Wright Assistant Secretaries were next elected. Two were to be chosen. The election was as follows: D. L. Adair, of Kentucky, and L. C. Waite of Missouri.

The Treasurer was next chosen. Mr. N. C. Mitchell, of Indiana, was elected.

The Association Organized.

The Chairman announced the association organized, and gave way to the President, Mr. L. L. Langstroth, who suggested that the Vice President from New York, the Rev. E. Van Slyke, should preside.

Mr. Van Slyke took the chair, and announced the convention ready for business.

A Step for Union.

Mr. Clark, the retiring temporary President, offered the following resolution, which was unanimously adopted:

"*Resolved*, That this association, when it adjourns, adjourn to meet at Cleveland, O., at 9 A. M., on the first Wednesday in December, 1871, at the same time and place as the North American Bee Keepers' Association: when, provided the other organization shall instruct its officers to do the same, the officers of this body shall resign, with a view of there and then consolidating both associations into one."

On motion of Mr. Peck, amended by Dr. Clark, Mr. King, Mr. Peck and Mr. Otis were appointed a committee to confer with a similar committee appointed by the North American Bee Keepers' Association, with a view to a union of that with this organization, and report the same to this association.

On motion, adjourned till half-past seven o'clock in the evening.

EVENING SESSION.

The association met at half-past seven o'clock, Vice President Van Slyke, of New York, in the chair.

The following committee, to report an order of business, was appointed: Messrs. Clarke, Peck, Moon, Baldwin and Ladd. While the committee was out, some one suggested as a matter for discussion the Italian bee. Several persons were called upon, and all, with one consent, began to make excuses. Mr. Waite, of St. Louis, Missouri, was suggested. Mr. Waite is deaf and had to be waited on by some one who went to him. Mr. Waite is a young, handsome, neatly dressed man. He arose and set out to read an essay on bee culture, written in a very attractive style and abounding in humor, as well as in what

seemed to be excellent practical hints. He said that in the management of bees no one must ever show the white feather. They did not like drunken breath. He opposed the use of tobacco smoke as injurious, and recommended the use of the smoke of rags or rotten wood instead. Some farmers, he said, gave their bees all the inattention they could. For such farmers, or bee keepers, he thanked God for the moth. There were an abundance of hives patented, and but few of them worth having. He favored large boxes as best adapted to having large supplies of surplus honey laid up. He gave, in detail, hints for the care of bees during all seasons of the year. His address, or rather essay, was warmly received, and the association tendered him its thanks.

Mr. Clark, of the Committee on Business, submitted the following order of business, which was accepted :

Order of Business.

1. The most successful winter management of bees.
2. The best method of artificial swarming.
3. How far is it wise to prevent swarming?
4. Are hybrids better than pure Italians.
5. Volunteer topics.

The First Topic

came up for discussion. Mr. Hosmer, of Minn., said his experience was that small swarms wintered better indoors than large ones. He wintered in a cellar well ventilated. He did not want less than a quart of bees to a swarm. He preserved queen bees and divided his swarms. He fed them about five pounds of crushed sugar (to each swarm) per year, commencing in March.

Dr. Bohrer, of Ind., said that a large colony and a small colony would not winter well together in the same room, owing to large colonies generating an undue amount of animal heat. The small colonies, under such circumstances, were apt to contract disease. He would have a special repository for small colonies, where the thermometer might be permitted to range about 45° or 50°, while between 32 and 40 degrees Fahrenheit was the temperature favorable for large colonies.

Dr. Bohrer would use an old blanket in covering hives, and corn cobs for the top of them to prevent the accumulation of moisture. He would not have a hive more than 12 inches deep. He believed in perfect neatness in his bee house. He was an enemy to spiders.

Question by a delegate—Would not spider-webs be a good moth trap?

Mr. Bohrer—The best moth trap is a strong colony of bees. [Laughter.]

Mr. Gallup was hostile to tall hives. They became too hot at the top.

Mr. Gallup was subjected to a running fire of questions. He used no honey board in his large hives.

Mr. Gallup stated that he put his large colonies near the floor in the wintering house, and the small ones near the top or roof.

Mr. Dallas, of Kansas, thought the indoor method of wintering best. He would have a deep, well-drained trench upon dry ground. Over this he would build a double walled house, the interstices between the walls filled with sawdust, the house provided with ventilators and double doors. In this he would put the bees after equalizing the swarms. Care must be taken to protect from dampness and too great a change of temperature in the ventilation from opening the door or the special appliances for the purpose.

Mr. King, of New York, said he called a hive ten and a half inches in depth, as spoken of by Mr. Gallup, a deep one. He recommended the construction of a winter bee-house, so as to answer the purpose of handling bees, taking honey from them, &c.

Mr. Wright, of Indiana, said he had found benefit to diseased swarms from putting a cloth over the top of the hive and placing fresh charcoal pulverized upon it. This absorbed impurities and improved the health of the bees.

Mr. Porter, of Minnesota, detailed an account of a travel north in his State into the Red river country. He thought he had gotten away from the bees, as he had inquired for a hundred miles for them, and found none; but at the head waters of the Red river of the North he found an Indian who said he had found bees near there (it was 200 miles north of St. Paul), and taken two pailfuls of honey from them.

He detailed how he had kept bees in a cellar in which he had four hundred bushels of rutabagas. "It is no trick at all to raise bees, and no trick at all to winter them. Thermometers were humbugs. He had known bees wintered without a particle of ventilation in a pit covered with straw, then a little water, then dirt. He did not believe in the different diseases that it was said bees had. Their diseases were in nineteen times out of twenty, and the twentieth time too, caused by uneasiness.

Mr. Clark, of Toronto, Canada, said that Sir Robert Peel used to say in Parliament, "Ireland is my difficulty." He would say wintering bees was his difficulty. His experience was that the best wintering temperature was about the freezing point. He believed that no rule could be laid down for wintering bees in all climates. In Toronto, where he lived, the thermometer was 16° below zero last Sunday. Here he found it disagreeably warm. His experience was that the best temperature was such a one as would keep the bees in a torpid state, and keep them at the same time supplied with fresh air.

Mrs. Tupper, of Brighton, Iowa, said that for twelve years she had been successful in cellar wintering.

Mr. Scott, of Kentucky, said that he lived as far south as the Blue Grass region, and would like to hear about outdoor wintering.

Mr. A. F. Moon, of Michigan, said he had found the best success in outdoor wintering. He equalized his colonies before winter came. He sheltered them from the sun and on the north and west sides from the weather. He found they consumed one-third more honey in this way than in indoor wintering. He divided the bee bread, so as to equalize the food for different stocks.

Mr. Mitchell and Dr. Claypool spoke on the same subject.

The Chairman, the Rev. Mr. Van Slyke, said he had upon one occasion wintered a hive out of doors on nine pounds of honey.

Mr. Hamlin, of Tennessee, gave his experience in outdoor wintering. He equalized his stock and regulated the ventilation to the strength of the swarms. He had used for a covering of the honey boards, straw, corncobs or hay. Year before last he had a hundred and fifty-six swarms, and lost none of them.

Adjourned to 9 o'clock next morning.

SECOND DAY—FORENOON SESSION.

Third Topic.

How far is it wise to prevent swarming? was the third topic.

Resuming the programme of yesterday, Dr. Bohrer, of Indiana, said the answer to this question depended upon whether the object was to produce the largest amount of surplus honey or the multiplication of colonies. If the former was the object, swarming should be entirely prevented.

Fourth Topic.

Are hybrids better than pure Italians?

Dr. Bohrer said that if the bee keeper wanted to get up a fight early in the spring, the hybrids were the bees to have.

Mr. Root said the hybrids were good workers on white clover. The pure Italians made honey from flowers that other bees would not touch.

Mr. C. F. Muth, of Cincinnati, said he had hybrids, and had never had any difficulty with them about stinging.

General Adair said that he believed we had two varieties of native bees in the United States. The large gray bee, a distinct species from the black bee of the South, was, he believed, better than the Italian bee, and was not as vicious.

Mr. Stevens, of Glendale, said he had the gray bee, and had always had it, and preferred it to the Italian bee.

Mr. Peck said a black queen fertilized by Italian drones brought forth gentle hybrids, but an Italian queen fertilized by black drones brought forth a vicious brood.

Mr. G. W. Zimmerman had his black queens mated with Italian drones, and found the resulting stock much more energetic than others.

Mrs. Tupper, of Iowa, would get pure importations from Italy frequently—that is, of queens—and put them in hives if she wanted the best work of her bees.

Fifth Topic.

The cause of bee swarming constituted the fifth topic.

Mr. Otis said his opinion was that swarming of bees was owing to the storing instinct, together with the antipathy of one queen against any other queen in the same colony. A hive became stocked with honey and supplied with two queens, and it was found necessary to divide.

Dr. Claypool said he had last year one stand of bees that became overstocked, laid outside the hive, but did not swarm.

Mr. Root said that in a half dozen instances, he had taken every drop of honey from a hive and cut out every queen cell, and the bees swarmed.

Mr. Barger said he had seen the queen drop in front of the hive and the swarm leave. He had also seen ten queens go out with one swarm.

Mrs. Tupper believed, also, at one time in her life, that bees never swarmed without a queen cell, but last summer she found the contrary. She did not have an Italian colony swarm, last season, that had a queen cell.

Gen. Adair said that last year he had a large number of swarms in which no preparation for swarming was made.

Mr. Moon had put bees in a hogshead and had them swarm. He had put them in a salt barrel, and found they would swarm when the barrel was only one-third full.

Mr. Langstroth said that if there were no disposition on the part of bees to swarm we should soon have an end of bees. He said no invariable rule could be laid down in regard to swarming.

Sixth Topic.

What are the troubles to be met with in bee keeping? This broad, endless question formed the sixth topic.

Mr. Moon enumerated the chief difficulties as swarming and going to the woods, the moth, robbing and wintering.

Mr. Porter, of Minnesota, said he had had his share of trouble with them. He would rather undertake to find ten Italian queens than one black queen. A feather or bristle brush were either of them very irritating to bees. A willow broom was better in handling them. He detailed his experience in introducing a fine Italian queen into a hive of black bees. He killed the queens of the black colonies and put his Italian queen in, then next day looked and saw her dead. He watched the hive closely, and at one time saw a small bee laying. He often found six or eight eggs in a cup. He came to the conclusion they needed food under these circumstances. He gave them food, and all was right after that. He was satisfied that where the bees had not honey the queen would lay a great many eggs in the same cell.

Mr. Langstroth said he had known foolish queens to put a multitude of eggs in the same cell. He had known queens to deposit eggs outside the cell, and that queen fertilized.

Gen. Adair had also known queens to deposit eggs outside the cells. He had found this in the case of queens fertilized in confinement, and had known the same queen to act properly when she had been permitted to leave the hive for fertilization.

Mr. Clark, of Canada, said that a great trouble in bee keeping was the lack of determination to succeed. Lack of attention to details was the cause of much failure.

Mr. Hart told of a visit to a friend of his in the Western part of Ohio, where he met a lot of bee keepers. None of them had a book on the subject of bee keeping, and none of them took a paper on the subject. He advised them to form

a society of bee keepers, and they did so. He has heard from them since, and their success has been much greater than formerly. Ignorance was the great cause of failure, and there was no lack of it.

The Secretary gave notice of the expenses of the association as $8 per day for the hall. Nothing more, unless a report of the meeting was printed, which was desirable. A collection to defray the expenses was taken up, amounting to over $50.

A petition was circulated, to be sent to the State Legislature, praying that body to enact a law to protect bee keepers from thefts of bees, especially in the spring.

AFTERNOON SESSION.

The association met in regular session, Vice-President Van Slyke in the chair.

Seventh Topic.

Is the Italian bee superior to the black bee? was the topic for discussion.

This topic had incidentally come into the discussion under other topics. The almost universal testimony was that the Italian bee was a better honey gatherer, more prolific and more tractable than any other bee.

Mr. Dallas said that the Italian bee would gather honey from watermelon flowers. Another speaker said it would make honey of the melons, but was fastidious. The melon must be a good one.

Eighth Topic.

Will the drone progeny of a pure Italian queen, fertilized by black drones, produce pure Italian drones? This knotty question was announced as the eighth topic.

Mr. Root said the theory was that drones were the product of the eggs of an unfertilized queen or a fertilized worker. Drones were also produced by fertilized queens, and the queen could lay drone eggs or worker eggs at pleasure. It was said that only the drones from a fertilized queen could fertilize a queen.

Mr. King said the object here was not to discuss the book theories, but if possible to controvert them and bring out something new.

Mr. Mitchell said he would not give a pewter cent for an Italian queen impregnated by a black drone. He believed the queen thereby received a taint that she never got rid of.

Proposed Testimonial to Mr. Langstroth.

Mr. King arose, and upon a suspension of the order of business, stated that Mr. Bickford had written to the American Bee Keepers' Journal an article suggesting that the bee keepers of America owed a lasting debt of gratitude to Mr. Langstroth, now the President of this association, and that it would be proper for them to raise for him the sum of $5,000. The Rev. Mr. Van Slyke had, without knowing anything of Mr. Bickford's action, written to him, making the same suggestion. He said that Mr. Langstroth was not an object of charity. The bee-keepers of the country were indebted to him. His health was not good now. He first made high bee culture possible by his genius and industry.

Mr. Van Slyke took the floor and said that the bee keepers of America owed a lasting debt to Mr. Langstroth, as the introducer of the movable frame hive.

The call was made for volunteer subscriptions. The following contributions were made: The Rev. H. A. King, $50; A. I. Root, $50; T. B. Hamlin, $50; Mrs. Ellen S. Tupper, $20; Messrs. Delland & Scott, $20. Subscriptions stopped here.

Mr. Root said that Mr. Langstroth's introduction of the movable frame hive had revolutionized bee culture and made the rearing of Italian queens possible.

Mr. Clark, of Canada, said that he was told that if Mr. Langstroth had his rights he would now be well off. He would rather subscribe to a fund to prosecute men who had infringed upon his patent and make them disgorge, than give directly to aid him.

Mr. Otis said that Mr. King had advertised Mr. Langstroth as an object of charity. He himself would give $500 for justice to Mr. Langstroth.

Mr. King—I will give $1,000, and draw the check now.

Mr. Otis—I would have you, Mr. King, prosecuted for your two worthless patents infringing upon Mr. Langstroth's patents.

The Chairman—This is personal and must be stopped.

Mr. King moved to refer this subject to a committee of three appointed by the Chair, the committee to report.

The Chair appointed Messrs. King, Root and Hamlin as that committee.

On a subsequent motion Mr. Clarke, of Canada, was added to the committee.

Mr. Otis wanted to have that committee take the $500 of his and the $1,000 that Mr. King proposed to give for justice, and use it properly to care for Mr. Langstroth's interests. It would not be long till he would be well off, if that were done.

Mr. King said he could repel Mr. Otis' insinuations, but he did not choose to do so in this meeting.

Mr. Mitchell said that he was sorry this matter had taken the turn that it had. He himself had just perfected an arrangement whereby Mr. Langstroth would be greatly benefited.

Mr. Otis here rose up, and said he was glad to hear Mr. Mitchell speak so. Every hive he (Mr. Mitchell) had sold was an infringement upon Mr. Langstroth's patent.

Mr. Mitchell was unanimously added to the committee.

Mr. Otis controls a large amount of territory for the Langstroth patent hive.

A short time was given to exhibitors to show their inventions, which they availed themselves of. Several bee hives were exhibited. Gen. Adair explained an excellent device for fertilizing queens; also one for arresting the queen when a swarm was coming out. One instance was related of arresting a queen and the swarm

went to the woods, staid seven hours and returned to the parent hive.

Paper by Mr. Gallup.

Mr. E. Gallup, of Iowa, read a paper entitled "Successful bee keeping in a nut shell:"

"The great secret in successful bee keping consists in knowing how to keep all stocks strong, or having them strong with brood in all stages, nursing bees and outside laborers at the commencement of the honey harvest. To illustrate this: A and B both have the same resources in their respective localities, or we will say that both reside in the same locality, and their honey harvest commences on the first of June, and the last half of July and first half of August there is no forage for bees. June and the first half of July is good, and the last half of August, and the month of September is good.

A commences in spring to stimulate, equalize, &c., and replaces all old queens or queens that do not come up to the standard of fertility with young prolific queens, allows but little increase (that is, providing surplus honey is the object). Here I will remark that with young prolific queens and abundance of room there is but very little danger of increase, and on the first day of June when the harvest commences he has every stock completely filled with comb brood in all stages, nursing bees in abundance, less than sixteen days old, honey gatherers over sixteen days old, and they are in the very best possible condition to commence storing surplus honey immediately. Then during the scarce time, in the last of July and first of August, stimulates and keeps up the fertility of the queens until the harvest again commences in the middle of August. His bees are then ready to commence storing surplus again as soon as the harvest commences. The consequence will be that A receives a profit in surplus honey, and pronounces the season a good one. In fact, meets every one with a smiling countenance, and is well satisfied that bee keeping pays, &c. On the other hand, B commences with the same number of stocks, in the spring, lets them manage themselves, and on the first day of June they are not in condition to store surplus, or at least but very few of them, and those few he allows to swarm themselves to death, or which amounts to about the same thing, when the honey harvest commences his stocks commence breeding very rapidly, and by the time his stocks get in condition to store honey the harvest is done, or nearly so, for it takes twenty-one days to hatch out a worker, and six teen days more, or thereabout, before they commence laboring outside, &c. Now the scarce time comes on again, and B has got no surplus honey, but perhaps has a number of extra swarms. The queens stop breeding entirely, or nearly so, especially so if the forage is entirely dried up or cut off. Now, when the honey harvest commences, in the middle of August, his stocks, instead of being in condition to commence storing, have to go to raising brood again to replenish their stocks of workers, for recollect that the brood hatched in June and July is very soon used up with old age, for the lifetime of a working bee is only from six to eight weeks during the working season. Now, you can readily see that B's stocks are expending all their force and energy to replenish their numbers again, and by the time they are ready to commence storing the harvest is past, and B has any quantity of stocks that he has to feed in order to carry them through the winter, or he has to double up stock, &c., and when he comes to sum up the season's operations he has received no surplus honey, and his surplus stocks, or a large proportion of them, have either to be fed or doubled up, in order to winter them, and the consequence is, his face is somewhat elongated, and his conclusion is that the season has been a poor one for bees. He has certainly had bad luck, and he is ready to attribute his luck, as he calls it, to anything but his own neglect or carelessness. For example, the season has been a poor one for bees, or his climate is not adapted to bee keeping, &c., A, with his management, in the same locality, mind you, has had good luck, as it is called. His stocks are all in excellent condition for wintering, no doubling up or feeding in winter, &c., for he has fed at the proper season to feed, for I hold it to be a fixed fact that the summer and spring is the proper time to feed. Keep your bees in the right condition to store honey, and when the harvest comes they will store it. There may be seasons and localities where bees have to be fed in winter; but I have never seen such when they were properly taken care of in the summer. The whole secret of successful bee keeping is contained in the above nut shell.

"The very first knowledge sought by the new beginner in bee keeping should be the above.

"Orchard, Iowa. ELISHA GALLUP."

Mr. Gallup's paper was well received.

Mr. King stated that in New York mel-extracted honey did not sell well. The fact that dealers in the article in New York reported no sale last fall had suggested the advisability of forming a honey company or association. The object of such a company was to secure an equality of the supply and prices in all the cities in the Union. He had thought of having mel-extracted honey made into a substitute for rock candy.

He said that a great honey merchant in New York said that if some way was not devised to make a market for extracted honey there would soon be no market for it. He did not think here was the place and now the time to organize a company, seeing that the two national associations would meet in Cleveland in December next.

Mr. Moon was called to the chair and Mr. Van Slyke spoke of the chemical nature of honey, and its capacity for being manufactured into candy. It was not of the cane sugar class. Honey was grape sugar, with a small proportion of cane sugar. Its composition was six atoms of carbon, twelve of hydrogen, and six of oxygen.

It was made susceptible of crystallization by treating it in the candied state to two and a half parts of alcohol to one of honey, subjected to pressure, then treated to one-tenth part of alcohol, warm. Then it would form semi-circular candy crystals. Another method was to put candied honey on bricks, allow the bricks to absorb the

cane sugar element, then treat it with alcohol. The result was beautiful acicular or needle shaped crystals—a candy retaining all the flavor of the honey, in the comb. The uses of honey in pharmacy, in domestic use and in the arts, were not sufficient to consume the quantities offered in the American market.

Mr. King said honey could be hardened so as to flint off by heating. This might be sold in railroad cars as candy.

Mr. Muth said he had some of his honey in jars candied, and he simply put the jars in warm water and it became liquid.

Mr. Peck, of New Jersey, said that the consumption of honey must be encouraged. The price must be put down so as to enable the poor to use it. It might be sold at ten cents a pound, and would redound ultimately to the advantage of bee keepers.

Adjourned to meet at half-past seven in the evening.

Evening Session.

The association met at half past seven o'clock, a good number of delegates present and Vice-President Van Slyke in the chair.

Ninth Topic.

What are the best honey producing plants to cultivate in a poor honey district? This was the topic for discussion. Mr. Root preferred basswood. He did not know how long the bees worked on it. He thought the basswood flower was the only flower that produced honey that produced sickness.

Mr. Dallas, of Kansas, said that in Kansas there was no basswood, yet, with some persons, the eating of honey produced in that State was attended with sickness. White clover honey was his favorite.

General Adair found a variety of turnip very excellent for a pollen producer. There was also a shrub called the Aralia Spinosa, which bore one of the best honey producing flowers. He had a few of them, and when in bloom they were covered with bees. He had never seen any buckwheat honey.

Mr. Porter, of Minnesota, said buckwheat was one of the best honey-producing plants in the country. He had saved a swarm that came in the middle of September, and owed his success to buckwheat. A good plant, in Minnesota, for honey was the golden rod. Raspberry flowers were good honey-producers. He also favored basswood. The dandelion was one of the best as well as one of the earliest honey plants. He had seen a variety of the lilac that would make as good a hedge as the Osage orange, and which was a fine honey-producing plant. The willow also was good.

Mr. Langstroth endorsed what Mr. Porter said about the honey-producing plants generally. He said there was no honey at all in the buckwheat. He had gone over acres and acres of it, and had not seen a bee upon it. Again, he said the buckwheat was one of the best honey-producing plants. He had gone through acres of it and found it laden with bees. Much depended on climate, season and location; south of here it was worth little for honey. So with white clover. Some seasons it was good and some bad for honey making. The same was true of the golden rod. He meant these remarks to show the different and contradictory observations that might be made from different standpoints, and to show the need of charity in comparing experiences.

The Rev. Mr. Van Slyke said that near New York city there was plenty of golden rod. His bees last season did not make any honey till the golden rod bloomed, and then they made great quantities.

The Mel-extractor.

Mr. Langstroth was requested to speak on the subject of the mel-extractor and its relation to bee culture. He said that in 1853 he became interested in the subject of extracting honey from the comb and using the comb for the bees again. He consulted mechanics. None of them helped him. If any one had said to him centrifugal force, he would have said eureka. A foreigner discovered the process. This discovery would again revolutionize bee culture in this country. Twice or thrice the amount of honey could be produced from the same stock of bees and the same care now as formerly without it.

Now, some means must be devised to disarm the public of the suspicion that the extracted honey was a manufactured concoction. The candying of honey was not an objection. Age did not hurt it. He tasted some twenty-five years old, and it was good. He had good authority for saying that good honey was taken from the ruins of Pompeii, nearly two thousand years old.

As to Italian bees, he found that often they built in boxes from the bottom upward, while the black bees worked from above downward. It was more difficult to get Italian bees to work in boxes than it was to get the black bees to do so. We have got to convince the public that this extracted honey was not adulterated. The way was to put the price down so that adulteration would be unprofitable. He thought the more the knowledge of how to manage this extraction and perserving of honey was diffused and acted upon, the better it would be for bee culture.

He suggested the use of blue grass with which to brush off the bees from combs. He had experimented in artificial combs, and the result had been just nothing at all. He had doubts about the bees using metallic combs for wintering. He hoped that the invention of artificial combs would be successful, in which, even if the bees could not be induced to breed, they might deposit honey, for emptying.

A vote of thanks was given to Mr. Langstroth.

Mr. Langstroth added, in relation to young queens, that he had ascertained that the supposed enmity of bees to all unfertilized queens was a mistake. He had put a very young unfertilized queen on the opposite side of the comb

on which a fertilized queen was walking. A bee would sometimes stop and stare at the intruder, as much as to say, "Does your mother know you are out?" Sometimes they would hustle her out of the hive, nearly killing her. Experiment only with *very* young queens.

Mr. Langstroth being called upon again, said he thought the drone progeny of an Italian queen would be pure Italian drones, be the drone by which the queen was fertilized, a black drone or an Italian drone. He said that when the Italian bees were first introduced into the country there was opportunity to test the theory. He said that in warm blooded animals where there was a common circulation between the mother and the unborn offspring, there was a decided influence exerted upon the mother. Mares that have produced mules had years afterward produced horses with mulish characteristics and of mule-like build.

Mr. Moon said that the drone progeny of an Italian queen, crossed from a black drone, was of a lighter color than the pure Italian drones.

Mr. Langstroth said there was every reason to believe that the Italian bee was itself a hybrid. Long before the Egyptain bee was introdeced into this country, there was evidence of a bee in America with a tuft on the head like the Egyptian bee. It was said, too, that the Italian bee could be produced from a cross with the black bee.

In regard to the fertile worker, he said that Huber thought workers had robbed a little and eaten of the ambrosia with which the queen was fed. Then they might be bees produced in imperfect queen cells *i. e.*, cells not quite large enough for a queen, and a little larger than that in which the worker was produced. He said instances had been found in which the head of the bee was a drone and the anterior part a worker, and *vice versa*. This was accounted for upon Mr. Wagner's theory of a double germ.

Mr. Gallup gave an experience of his in which he discovered a queen, with the forepart of the body that of a drone.

Mr. Langstroth said it was possible for a worker grub or egg to be cultivated by the bees and formed into a queen.

Mr. Moon gave his experience as to honey-producing plants. In dry seasons honey-producing plants failed. While in good seasons they were rich in sweetness.

Mrs. Tupper said that in the region in which she lived there were honey-producing plants all the season. She had buckwheat sown at various times, early and late every season. The weather made a difference. Wild cherry made a great deal of honey, but it was unpalatable, as it had the bitter taste of the tree. The Alsike had been good. She believed in sowing for the bees plants that could be used for something else.

Mr. Peck said he found a plant in the Southern States that was the best of honey-producing plants, but he had never heard a name for it. The honey from it smelled like verbenas.

Mr. Van Slyke said he had received the flower of the tree spoken of by Mr. Peck, and had named it, but could not remember the name.

Mr. A. J. Markley wanted to know if the blackberry was a good bee plant.

Mr. Van Slyke said as far as his experience went the blackberry was not good.

Tenth Topic.

This was the question—"What is the benefit of salt to bees?"

Mr. Zimmerman said the bees were fond of it. When put under the hive it prevented ants from innovating the hive.

A member said that he had learned from an old and successful German bee keeper that he had put salt upon the alighting board, and had never lost a brood of bees.

General Adair said he found salt a good disinfectant among bees during bee cholera.

Eleventh Topic.

This topic was "the best method of introducing queens." Mrs. Tupper was called upon. She scarcely ever lost a queen in introducing her. She first detached a colony, put the queen with it, then took the bees from the hive away and allowed them to return a few at a time. The detached colony she put in a new hive, precisely like the old one. Another way was to put the queen in a wire cage and cover the end of it with a thin coating of wax and put it in the hive. In twenty-four hours afterward, or thirty-six at most, the bees would liberate her. Then they never hurt her.

Mr. King said he had lost five queens in that way. There was a smell about imported queens that bees hated.

Mr. Wright put the bees in a large cage, and introduced with her thirty or forty of the colony she was to preside over, one at a time. He would allow them to stay with her thirty-six hours, then would liberate her with them in the hive.

Mrs. Tupper had succeeded by taking the queen from a hive, agitating it, and then introducing the new queen.

Mr. Porter had smeared the queen with honey and introduced her.

Mr. Wright had seen queens deformed by having their wings gnawed off by the other bees in the cleaning process when smeared with honey.

Mr. Benedict removed the old queen and introduced the new one at once. He first dipped her in sugared water.

Mr. Muth had done the same way, and had only once failed.

General Adair had had queens stay in the hive two days, and then be killed. In a particular instance a swarm killed eight queens, and obstinately refused a queen afterward. He usually caged a queen for several days in the hive she was to rule.

Mr. Zimmerman had a refractory colony, and by halving it and another colony, and creating out of them two colonies, one-half of each of which was strange to the other, he introduced the queen to the queenless colony, where she was well received.

Mr. Markley gave an amusing account of his difficulties in introducing queens, and his ex-

periments in what he termed "bumbleizing" the black bee. In the latter process he introduced a bumble bee in his hive and failed.

Mr. Furman had met and conquered the difficulty complained of by Gen. Adair by removing the bees from the hive, putting the queen in with the comb left in the old hive, then taking to a distance the hive to which the colony has been transferred, and allowing the bees to return a few at a time to the original hive. The queen to be supplanted must first be removed.

A letter was read from Mr. K. P. Kidder, of Vermont, first excusing his absence from the convention, then offering suggestions for that body. He suggested that it would be better for bee keepers to strengthen and increase the size of their stocks than to multiply their number. It also recommended the new swarming system. Received and ordered to be placed upon the records.

Mr. King offered a resolution that the association tender a vote of thanks to the various roads that had reduced fares to delegates attending it; also a resolution of thanks to the hotel keepers of the city that have entertained delegates.

Both resolutions were adopted unanimously.

On motion of Mr. Peck, the matter of electing honorary members was referred to a committee of three, viz.: Messrs. Peck, Moon and Adair.

Adjourned to meet at 9 o'clock next morning.

THIRD AND LAST DAY—MORNING SESSION.

The convention was called to order at 9 o'clock yesterday morning, Vice-President Van Slyke in the chair, and a comparatively large number of members present.

Honorary Members.

Mr. Peck, of the Committee on Honorary Membership, reported as follows, viz.:

"The Committee on Honorary Membership would report that in their view the title of honorary member of the American Bee Keepers' Association should be conferred as a distinguished mark on those who have assisted the bee keepers of North America in improvement and progress in the science of apiculture, and that such title shall be relieved from all taint of a mutual admiration society, and would therefore recommend the following persons for honorary membership: T. W. Woodbury, Mount Radford, England; F. W. Vogel, Lekmanshöfel, Prussia; Rev. George Kleine, Luethorst, Prussia; Andrew Schmid, Eichstadt, Bavaria; Rev. John Dzierzon, Carlsmarkt, Silesia; Baron A. and Baroness L. Von Berlepsch, Munich, Bavaria; Prof. C. T. E. Von Siebold, Munich, Bavaria; Maj. F. Von Hruschka, Dolo, Italy; Doctor A. Dubini, Milan, Italy; Viscount De Salietto, Milan, Italy: A. S. Packard, Salem, Mass.; C. V. Reily, St. Louis, Mo. It might be claimed that some of the prominent bee keepers of this country should be included in the above list, but as they have already been voted members of the great family of bee keepers of North America, the committee deem it improper to again reiterate the universal expression of such opinion.

"E. J. PECK,
"A. T. MOON,
"D. L. ADAIR,
"Committee."

Mr. Clarke, of Canada, objected to the preamble and to the explanation in the conclusion, as an implied criticism upon the action of the North American Bee Keepers' Association, formed at Indianapolis in December.

Mr. Peck said that the preamble and concluding explanation would prevent all misinterpretation of the report, and neutralize all tendency to mischievous influence.

On motion of Mr. Peck, a vote of thanks was given the Associated Press and the press of the city for full reports.

On motion of Mr. Peck, a standing committee of five on transportation was appointed to provide for reduced rates of fare to the Cleveland meeting, viz.: Messrs. Moon, of Michigan; Mitchell, of Indiana; King, of New York; Waite, of St. Louis, Mo., and Clarke, of Canada.

Dr. Dillard, of Kentucky, moved to appoint a committee to select persons to prepare papers to be read at the next annual meeting of the association. Carried.

A resolution was passed recommending the forming of auxiliary State, county and city organizations in all parts of the country, and that the journals of apiculture and agriculture in general be hereby solicited to publish this request.

Gen. Adair wished to explain his remarks, on a former occasion, during the session of the convention, about two varieties of bee in the United States. He said that he had stated that he believed the gray bee, in its purity, might be probably as good as the Italian bee. He did not state it was as good. The cross of the Italian bee with the gray bee was less vicious than the black bee cross. As you go in the extreme South the black bee disappears, and as you go North the gray bee disappears. The gray bee was found, in its purity, on the Rio Grande. He wanted, in speaking of the gray bee, to call attention to the possibility of our having a bee in this country whose value we may have underestimated, or not yet learned.

The Testimonial Committee.

Mr. Clarke, of Canada, of the Committee on the Langstroth Testimonial, reported as follows:

"The committee to whom was referred the matter of a testimonial or donation to the Rev. L. L. Langstroth, beg to report that after a protracted, thorough, and to some extent, confidential investigation they have come to the following results:

"1. They find that owing to a series of untoward events, Mr. Langstroth has received but very meagre compensation for his great services to American apiculture.

"2. That Mr. Langstroth, in his old age, is not only in straightened circumstances, but is afflicted with a malady which renders close and continuous thinking perilous to him, so that he is precluded from application to study or business.

"3. That in view of all that Mr. Langstroth has done to promote the interests of bee culture, it is incumbent on the apiarians of America to make an effort for his comfortable maintenance in the decline of life.

"4. That in furtherance of this object the following measures be taken, viz. :

"That the Vice President, Secretaries and Treasurer of this association be organized into a committee, to be called the Langstroth Testimonial Committee.

"That a general appeal be made for subscriptions on behalf of this object, as proposed and commenced by Mr. King at the meeting of the association yesterday.

"That a proposal, submitted to this committee by Mr. N. C. Mitchell, to furnish a large photograph of Mr. Langstroth to all and sundry at one dollar, out of which at least seventy-five cents shall go to Mr. Langstroth, be published as widely as possible, with the warm approval of this association, in the belief that a large multitude of persons, bee keepers and others, will be anxious to possess themselves of such a *souvenir* of one who has so distinguished himself in the domain of apiculture.

"That whatever is obtained in the ways above enumerated be transmitted to Mr. N. C. Mitchell, by him conveyed to the Rev. L. L. Langstroth, and reported to this association as part of the Treasurer's official statement.

"All of which is respectively submitted.

"WM. CLARKE, Chairman."

On motion, it was agreed to make the price of the photographs one dollar without and two dollars with Mr. Langstroth's autograph.

When the report was read, Mr. Langstroth said it was against his feelings to have his personal matters taken up by the association. If his own wishes were consulted, he would like the matter to go no further. He did not mean by these remarks to reflect upon the committee or the association.

Mr. Clarke, of the committee, said the committee had all the while been aware of Mr. Langstroth's feelings on this matter as just expressed by him.

Mr. Porter said he could not do too much for Mr. Langstroth. He felt paid for coming here by the privilege of seeing him.

Mr. Van Slyke hoped Mr. Langstroth would permit the matter to go on.

Mr. Moon was well acquainted with the feelings of the bee keepers in the country, and he could say that they would all feel it a privilege to contribute to this testimonial.

Mr. Mitchell said he had often been asked for a photograph of Mr. Langstroth.

The report was received and adopted.

Mr. Mitchell, of Ind., spoke of the Egyptian bee. He said they are beautiful little fellows. He took a lot of hives to the prairie. He found out that the Egyptian bees were cross fellows. They went out of the hive like a flock of quails. In his experimenting with them he used armor, but got stung fearfully, nevertheless. The bees stung the trees, the weeds, the dogs, the children, and everything. But he wanted to give them their due. They made more honey than any other bees he ever knew, but when they made it they meant to keep it. He was not certain his Egyptians were pure.

Mr. Proctor said he intended to go home and report the Egyptian bee a humbug.

Mr. Langstroth said he made a number of importations of the Egyptian bee to this country. He had never had an Egyption queen which he was sure was pure. His opinion was that the Italian bee was a cross between the Egyptian bee and the black bee.

Gen. Adair thought it doubtful if a pure Egyptian bee had ever been introduced into this country.

Mr. Langstroth said that "buffalo chips," and also the excrement of cattle, freed from all moisture, and burned, and the smoke used, was very effectual in taming bees for a while. It might be made to burn by dipping an end in kerosine. It should not be saturated. Columella mentioned this substance. It was, therefore, two thousand years old. The Egyptians used it now.

The association here adjourned. It will meet again in Cleveland in the month of December.

Of one hundred and forty signers to the constitution all but twenty reported themselves as bee keepers. Slips of paper were circulated on which members wrote their names, post office address, pounds of honey produced by them last year, price per pound, number of pounds of beewax sold, and whether the hive was a movable comb hive or the box hive. One hundred and twenty responded. We here give the aggregate result of their reports :

The total number of stocks of bees owned by these one hundred and twenty persons was 5,051. The number of pounds of honey produced by them last season was 83,065 pounds. It sold at an average (counting eighty-six persons who reported the price) rate of 29¾ cts. per pound. The number of pounds of wax sold by the same was 1,046. Of the 5,051 stocks, 4,612 were in the movable comb hives, and 439 in the box hives.

Many of the above reported stocks, probably more than half, were the increase of last season. A large number of the producing stocks were used in queen raising, which, when practised extensively, is incompatible with great production of honey. Many others were engaged in multiplying colonies for the market, which is also incompatible with honey producing. One of the bee keepers reports 390 hives and a honey product of 8,000 pounds. Another, a resident of this city, reports 90 pounds per hive last season from 20 hives on his house roof.

Everybody was pleased with the association and its results. It is to unite in December with another national association, and the two are to form one body.

Views were compared by men from distant parts of the country. Apparently contradictory experiences were reconciled. Mr. Langstroth was the recipient of an expression of gratitude, and will be of something more substantial, which has been long due him, but tardy in coming. By a unanimous vote of the Association he was given the special privilege of speaking when he chose, and as long as he chose. He solved many knotty questions, and poured oil upon the waters when they were troubled.

Among other things he explained the striking difference between black and Italian bees in their mode of working in honey boxes. General Adair told the convention about the gray bee of the South. Mr. Mitchell branded the Egyptian bee as an impracticable humbug, only from its fierce unrelenting combativeness, and its indomitable ill temper. This convention was to young bee keepers what a normal school is to teachers, what professional school is to the lawyer or physician—to experienced ones it was a professional conference.

The universal expression of the bee keepers was in favor of increasing the consumption of extracted honey, and the production also to such a degree that it will be within the means of the poorest classes. The formation of a honey company, not to keep the price of the article up, but encourage the consumption of it, was talked of. By extracting the honey and returning the comb for the bees to use again year after year the production of the article, it was said, could be doubled or trebled. Honey extracted could be sold for one-third or one-half the price of honey in the comb. Then encouragement was given to forming Bee Associations in every State, city and county. In very many instances this suggestion will be acted upon. It requires no prophet to name the result. Everybody knows how infectious experience and knowledge is when men meet in mass to confer upon what pertains to their avocations or professions. Iron sharpeneth iron. The improved practice and appliances in bee culture, the control of the bee and the knowledge of its nature so widely and rapidly diffused in the last ten years will spread with a tenfold increase of rapidity in the decade just now begun.

[For the American Bee Journal.]

A Season in New Jersey, No. 2.

I found one swarm which had been reduced to less than a dozen bees, but I could not satisfactorily account for such reduction. A good queen was among them, and I soon introduced her to a colony of natives owned about half a mile away, being the nearest black colony. I traded for the hive and brood, and put the queen and bees in a box of empty combs.

The hive which contained the native swarm was about 18 inches high, and 7 by 9 inches across the inside. That was a real Jersey hive. It was perfectly guiltless of any arrangement for removing honey, and I have seen no hive in this place, except what I brought here, with so much as a place for a single box. Those persons who use this style of hive, also deem it necessary to *set up* the hive on four clam shells, to keep out the worms! Well, I brought home my hive and brood under one arm, and brushed off a swarm of Italians from their combs, letting them take possession of the box, and giving their brood to other colonies. I did not wish to transfer the brood to frames then, as I thought they would breed faster in that small hive than in a larger one, as it had more combs than they could then use. I put the whole swarm (which was small) in the hive, and in eight or nine days they commenced working outside of the hive. I had never before noticed bees of that age (eight days) working in the fields, and considered it as rather remarkable and worthy of notice. Ordinarily, I believe, the instinct for working in the fields is not developed until the bee is about fourteen days old; and the same idea has, I think, been advanced by others. Has it not, Mr. Editor?*

It seemed to be with them a case of necessity, as the older bees were swept away by the winds, not leaving enough of suitable age to gather stores for their daily wants. In process of time, however, the hive became filled with bees, and they were then transferred to frames. Blossoms were plenty, with honey in them, during a good part of April and May; but the bees did not increase or gather honey in proportion to the amount of forage.

I should here state, that during all this time my hives were exposed to the sun, wind, and rain, except the protection of the fence already mentioned. No shelter from trees, bushes, or any such thing; and they had been reduced during the winter by moving and neglect, so that they were not in a fair condition to start with, or in a fair place. Then, too, it was said to be an unusually rough spring, and the native bees did not swarm until June, whereas they usually swarm here from the middle to the last of May. But then, if I had known, "it might have been" different.

Now I propose to tell you what I mean to do about it. There seem to be three or four ways open. First, *not to* keep bees. Second, to go where these troubles do not exist. And, Third, to try and checkmate them—which I think I may, to some extent.

The first method of solving the difficulty, is out of the question, for a professional bee-keeper like me. The second may be the wisest course, and be eventually adopted; but I think of trying the third way.

I do not expect to contend with the Power that controls the winds and the rain; but I will shelter my little pets from some of the violence of these elements, for this purpose I have put up a shed, opening only to the south, with conveniences for ventilation in hot weather. The front will be so arranged, that I can have the sunshine strike the hives or not, as I may deem advisable. There is a semicircular space in front of the shed, which is enclosed with a grove of pine and oak trees, from ten to twenty feet high. This will certainly give some protection from cutting blasts and driving storms. By keeping the sunshine from the hives in early spring, the bees will not be tempted out unless the weather is abundantly warm enough. But, sure enough, they have got to live, and must gather their stores outside of my grove, or not be of any profit to me! O, yes, but I do not intend to encourage them to go away early in the season. To keep them at home, then, I will supply them

* By the introduction of Italian queens in colonies of common or black bees, the fact was ascertained, that young bees do not ordinarily engage in outdoor labor, till they are nearly two weeks old.

liberally with flour as long as they will use it, feeding it when the weather is calm, which is usually from two to four hours in the forenoon. I will also keep them supplied with water and liquid honey; and by these means I hope to prevent an alarming loss and secure a fair increase.

Whether I can do this, remains to be seen. Hundreds of acres of huckleberry blossoms here, yield a good supply of fair honey in May. Fruit trees, and large plantations of raspberries and other small fruits crowd in, one after another, giving a continued succession until the last of May, when clover comes in bloom.

The light soils of this region are favorable for the secretion of honey, when there is a sufficient amount of rain. Go where you will, and I do not think you will find clover producing much honey on a wet, heavy, clay soil; or at least not half so much, as a somewhat sandy or gravelly soil; provided, always, that neither is injured by drouth.

In my next I will give you my experience in buying bees to stock up with.

J. L. HUBBARD.

Bricksburg, N. J.

[For the American Bee Journal.]

Beekeeping Down East.

The season of 1870 was not a favorable one for bee-keepers in Maine, although the bees generally gathered sufficient stores to carry them through the winter safely.

Spring opened early and favorably, but fruit blossoms did not yield as plentifully as usual, consequently it became necessary to feed until the appearance of white clover, which yielded finely for about ten days, when it was suddenly cut off by the intense heat and drouth. Thus only comparatively few hives made any surplus—while many more were too light to winter.

Late in September I examined my stocks, to ascertain how many would have to be fed or united, and found, very much to my surprise and delight, that every hive had ample stores for winter, and for that "March hill," which is such a terror to beekeepers and so fatal to weak stocks in our northern climate. Having been unusually busy in my office for about two weeks, I was not prepared for such a pleasant surprise, but it was none the less agreeable on that account.

The bees had gathered an almost unprecedented amount of honey from golden rod and other late flowers, which was most fortunate for them, and us; although it did not recompense us for the *immense stocks* of surplus boxes, nicely filled with white clover honey that we were entitled to but didn't get.

I use the American hive, mostly, with quite satisfactory results. I think it has many good points, and a few bad ones, like all other hives with which I am acquainted. I do not believe that perfection in hives has yet been reached, but thanks to the movable frames, the honey extractor, and the light that has illuminated this heretofore mysterious pursuit, we are enabled to overcome hive *deficiencies* with *skilful management*, and prosecute this art with pleasure and profit.

I am wintering nearly all my stocks in the cellar. Their room is perfectly dark and quiet; not a ray of light penetrates it, and the bees are remarkably still. For upward ventilation, I simply removed the supers from the tops of the frames, without any absorbing materials whatever. The temperature is uniformly 32°. I have wintered bees in a great variety of ways, but never knew them to consume so little honey, cluster so snugly, and so few perish, as thus far this winter. I shall adopt this method in future, until I become persuaded that there is a better way.

The prevailing custom throughout this State is to leave the bees on their summer stands during the winter months, without any protection or preparation for cold weather and sudden changes of temperature. The natural result of such neglect is disastrous to a greater or less degree in nearly every instance.

We have in the State from twelve to fifteen thousand beekeepers, and probably nine out of every ten have not advanced beyond the old box hive—a most lamentable state of "bee darkness," truly. Yet this state of things is not attributable to unusual perverseness, or an unwillingness on the part of our people to accept improvements. It is mainly owing to the vast amount of trash that has been foisted upon them by unprincipled men, under the *guise* of *improvements*. Patent hives, without a single redeeming quality—moth traps, and kindred humbugs have been the bane of bee culture in Maine. But there is light ahead! We have many intelligent and progressive beekeepers, who are alive to the real and substantial improvements that have been made; and my apiarian friends, in other States may rest assured that the Yankee element of this State will not be long in discovering that an "honest penny may be turned" in this direction—where they have heretofore found but little honey, a few swarms, and any amount of *humbug, swindle* and *robbery*—and THEY WILL TURN IT!

GEO. S. SILSBY.

Wintersport, Me., Jan. 31, 1871.

Answer to Puzzle, No. 2.

B has fifty swarms and A has seventy.

J. W. FAULKNER.

Vevay, Ind., Feb. 3, 1871.

Answer to Puzzle No. 2. Amer. B. Journal, Feb., 1871, page 188. A has seventy swarms, B has fifty. H. W. S.

Cincinnati, Feb. 4, 1871.

No insect structure can more thoroughly exemplify the most appropriate adaption to its uses and the most admirable elegance in the formation in the means of execution, than that of the honey bee.

[For the American Bee Journal.]

Bees in North Carolina.

Dear Journal:—I must confess negligence in not writing to you before, but we are all working up here now, in Wake county, about bee culture, and are going to give more attention to the pursuit, sow Alsike clover, and produce honey, like our northern and western brethren.

It appears from census statistics, of 1860, that North Carolina was the second State in the Union in the quantity of honey yielded, and we hope to keep, yea, to increase our reputation.

The last season was not favorable for bees. The early part was wet, and the middle very dry—somewhat better late in the fall, so that swarms that survived the dry weather stored nearly enough for winter.

There were not as many swarms cast last season as usual. Many of the late ones died, or run so low during the drought, that they became prey for the bee moth; and some of the old stocks, too, that had swarmed themselves weak.

Our crop of surplus honey was very light.

I had an experience last season that was new to me, and I can come to only one conclusion about the matter. I will state the circumstances, and your readers may think what they please of it. In August or the early part of September, I introduced an Italian queen into a swarm of black bees, for Josiah Turner, Esq., at Raleigh, and as we wished to raise queens from her, gave especial attention to the swarm, feeding, putting in drone comb (as there was none in the hive), &c. For a time all progressed finely; the progeny was beautifully marked, till one-half or two thirds of the population were pure Italians. Then some hybrids appeared, and finally the swarm returned to hybrids and bees that you could not distinguish from such as are produced by a black queen. The queen which I introduced was claimed to be over one year old, and had always given pure stock. She was raised and sent to me by Mr. Shultz, of Salem, N. C. I took the precaution to clip her wings, before putting her in the swarm, and do not think it possible that she died and the swarm raised another, as I could not find the least trace of a queen cell; and do not think the swarm was queenless, or had time to change queens between my examinations. Had the queen been changed, or a new one raised and substituted, ten years' experience in breeding Italian queens ought to enable me to detect the fact. The wings seemed to have partially grown out again. About one-third was cut off the end.—I notice several writers recommend clipping queens' wings. I would inquire how much may or should be cut off? I have had queens of some months old change stock.

J. Curtis.

Raleigh, N. C., Feb. 3, 1871.

In a honeycomb the base of each cell is composed of three rhomboidal pieces, placed so as to form a concave pyramid.

[For the American Bee Journal.]

A Good Honey District.

Mr. Editor:—In the December number of your Journal, I saw the inquiry from Mr. A. L. Brown, London, Ohio,—"Where are good honey districts?" He says that he has to depend mostly on white clover for surplus honey. I think that northern Iowa is far ahead of his section of country for bee pasturage. Nearly all the best honey-secreting blossoms are to be found here, except the tulip tree. On the prairies and in the timber are to be found flowers springing up everywhere, as soon as the frost is out of the ground six inches deep. Then our native groves present one grand bed of flowers, so numerous are the wild plum, the crab apple, and the cherry trees. Then come all kinds of berries, blossoming in their rotation, with any amount of cultivated flowers.

This country is comparatively new, so that every plant grows luxuriantly, especially white clover, borage, golden rod, &c., with basswood all through the timber, and plenty of fall pasturage. I have been a bee-keeper here for three years, and have not fed any yet, although some had to feed in the spring of 1869, but they filled the hives in the fall, and were in good condition for winter. We have little or no cholera or foulbrood, and no drouth since this country was settled that did not leave us half a crop of grain. Our winters are long, with steady cold; so that bees must be put into good winter quarters, to insure good success. A dry cellar is the best repository. I am wintering twenty-three stands this winter, and have never lost a stand yet. Our swarming seasons are from the first of June until the fifteenth of July. I think that the bee moth needs a little extra watching in this country.

J. W. Lindley.

Mitchell, Iowa.

[For the American Bee Journal.]

Bees in Colorado.

I see in the Journal for January, an inquiry from Mr. James Heddon, asking if Colorado would be a good place in which to keep bees. As I have travelled some in Colorado territory, perhaps I may be able to give him the desired information. I have seen many localities which I would call poor for bees, but never saw one where they could not be kept at all, until I visited the plains. Bee culture cannot be made a remunerative pursuit in Colorado. As far as the eye could reach it was in most places only a barren, desolate, and dreary plain. The whole Cache a la Poudre valley, said to be one of the finest in the territory, would not yield enough honey to support a single colony of bees.

There is no natural pasturage except a limited amount at the base of the mountains; while the cultivated plants which produce honey cannot be grown except by irrigation. As regards the climate, I will say that at Greely, Colorado, the thermometer rose to 90° above zero nearly every

day, during the latter part of May, 1870; while in December of the same year the mercury sank to 27° below zero. Mr. H. can judge from these facts whether bee-keeping would be a *profitable* pursuit in such a country or not.

HERBERT A. BURCH.

South Haven, Mich., Jan. 25, 1871.

[For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL:—We have just returned from the Cincinnati Convention, where we had the pleasure of meeting many with whom we felt ourselves well acquainted, but had not been so personally until then; and we must say that the reception which your old friend "NOVICE" received when he was recognized, was such as we had hardly dared expect.

We must confess that the number of warm friends who took us by the hand, and the congratulations we received, were more than ample compensation for our writing for the Journal during the past four or five years.

We also enjoyed the *very great* pleasure of a long friendly talk with Mr. Langstroth; and we very much regret that his health will not permit him to give us the benefit of his writing through the Journal. His ideas have a clearness and a comprehension of the whole subject of bee culture, that we have never met before. Even at the time of his invention, the movable comb hive, years ago, he seems to have looked forward and foreseen just what would be needed so far, that we think the most successful bee-keepers will agree together, after years of experiment, that the hive he gave us, is all and more than just what we needed.

We suppose you will have a report of his remarks at the Convention, and therefore do not send them; but in our opinion they were of more value than all that was said on bees.*

The rest of the proceedings we will leave for some one else to give, and make a few notices of last month's Journal.

In regard to comb foundations, our experiments, made in October last, would prove something very different indeed from the single experiment of Mr. Quinby; and we will ask only one week to test the matter in full frames, be it in March or April, with good foundations.

Happy to hear from Gallup again.

Jasper Hazen's long article, like all others we have seen from his pen, (and they are widely scattered,) purports to be written for the purpose of giving information on bee-culture; yet we cannot gather a single idea more than that he has made some great discovery on hives—*Circular on receipt of stamp!*

"Without practising any *violence* on the colony!" We presume that refers to movable combs and the melextractor.

If our good natured editor does not like to tell a correspondent that *there are advertising pages* for patent hives, let us at least show that *we* feel it. Mr. Hazen cannot but be well aware that the Langstroth two-story and many other hives give every advantage that his does on prevention of swarming, by giving room. Whether the room is in boxes or full sized frames at the side of the brood, there certainly can be no advantage in boxes over frames. Any bee-keeper who *does not* give his bees all the room they can use, is certainly behind the times.

Mr. Hazen, please be open and honest and tell us in the beginning that your sole object is to sell *rights* for your hive.

Mr. Gallup may well say he could not realize the capabilities of the melextractor until he had tried it.

Had Mr. Quinby been at the Cincinnati Convention, he would have found that there is a very *strong* tendency to give Mr. Langstroth the whole credit of introducing the movable comb hive, now at least.

We think queen nurseries will work, and possibly even if they *are not* patented.

With high anticipations of what the coming season of 1871 is to develop by the aid of a combined brotherhood of disinterested bee-keepers (not patent hive men), we are among the many yet a NOVICE.

* If this be so, he must have been very meagerly reported. —ED.

[For the American Bee Journal.]

Report, Cross-breeding, and Questions.

I commenced the spring of 1870 with seven colonies of black bees, and one with a drone laying Italian queen—all in movable frame hives, wintered on their summer stands.

On the 22d of September, 1869, I received from Mr. A. Grimm, of Jefferson, Wisconsin, by mail, two Italian queen bees. I clipped a wing of each, caged, and introduced them. One of them the bees neglected, and she died in the cage; but I succeeded in introducing the other. I made frequent examination for eggs and brood during October following, but found neither. At Christmas the weather was warm and pleasant; bees came out of the hive, and I examined it thoroughly. I found neither eggs nor brood, and felt much disappointed. I frequently saw the queen, apparently all right. Made no further examination till February, 1870. The 16th was warm, no snow on the ground, and bees flying. Examined and found brood in worker cells, from the egg to capped brood, with caps raised. This was conclusive evidence of drone brood, and you may well believe I was disappointed. I made no further examination till March 10th, which was a warm day, with bees flying. Found brood increased, hatched and hatching, and no sign of worker brood.

Query 1. Can any of the readers of the Journal explain how this occurred? I do not believe Mr. Grimm would knowingly sell me or any man a virgin queen for a fertilized one. Did she become a drone layer by being chilled when in the mail? There were no dead bees in the transporting box. The next day after she was introduced was very cold. It was the best mishap that could have occurred. I will explain. I furnished her with worker brood, and empty

drone combs, and kept her and her colony rearing drones until July. At the same time I destroyed all the black drone brood in my hives, and thus kept my apiary absolutely clear of black drones. No other bees nearer to my apiary than one and a quarter miles, and only two colonies there—unless possibly some wild bees. I distributed Italian drone brood among my colonies as needed. I wrote to Mr. Grimm about the drone laying queen, and he sent me another, which I received April 28th. My first artificial colony was made April 26th, by removing a strong stock from its stand and replacing it with a new hive furnished with empty combs, honey, and brood from a second stock. April 28th, artificial colony fully reconciled. I then removed from them all the brood I gave them, and introduced my newly arrived Italian queen in this artificial colony with perfect success. After she was acknowledged by the colony, I strengthened them with black brood. On the 1st of May the queen was laying. On the 6th I made a second artificial colony, and gave them Italian eggs, from which they reared a queen. She was purely impregnated, and had a large stock of brood in her hive on the first of June. I continued to make artificial colonies until I had increased my number to twenty, after which I destroyed the seven black queens and replaced them with queen cells. The result is I have seventeen purely fertilized queens, including the one I started with, two hybrids, and one doubtful; with over 350 pounds of extracted honey. I believe there cannot be found a worker bee in the seventeen colonies, with less than three yellow stripes. The queens I ordered from Mr. Grimm were the daughters of his imported Mona queens. The Italian drones were all reared from the drone laying queen, which I received in September, 1869, and the queens reared from the queen received in April, 1870. Thus you see a cross fertilization was effected, with all that were purely fertilized. The drones of the drone laying queen were very dark colored, but had three narrow stripes. My first reared queen produced drones about the first of July of a much brighter color.

The artificial colonies were mostly made, as the first, by removing a strong black colony to a new stand, when the bees were flying, collecting the returning bees of the removed hive in the new one, on the old stand, and furnishing them with empty combs, Italian brood, or sealed royal cells. Thus I increased and Italianized at the same time. I lost one-half or more of the queens reared, when out to meet the drones; but every queen that became fertile and commenced laying, is a good prolific queen, and was living when I tucked them up for winter. From the above you see the sixteen out of nineteen of the queens I reared are cross fertilized. I believe bees can be improved by cross-breeding, and deteriorated by in and in breeding, just like farm stock. I have determined to continue this plan of cross breeding. Thus I will get a queen from Dr. Blumhof, and rear queens from her in the fall, and prevent them being impregnated until they have lost the inclination. Then I will rear Blumhof drones from them in the spring, to fertilize the young Mona queens. At the same time I will destroy all the Mona drone brood that may be reared in my hives, (no other Italian bees being near mine.) Thus all the queens that will be purely fertilized will rear cross breed bees. I believe if the crossing is attended to, every second year, it will secure the best of stock, much more certainly and with less trouble than by re-queening.

Query 2. Bee-keepers, what is your opinion of my mode of cross-breeding? With me, you see, it is practicable.

Query 3. Who knows what quality of bees can be produced from an Italian queen impregnated by an Egyptian drone? Will they be cross, or peaceable? Good, worthless, or poor? and how marked?

The advice of almost all queen breeders is to select the queen that produces the lightest colored workers to rear queens from, and continue thus to select. The tendency is in and in breeding.

Query 4. Is not this course pursued by those who rear queens for sale, the queen progeny of which are always duplicates of themselves? And

Query 5. Has any one with queens thus reared annually, produced a large yield of honey from his apiary?

I have no fancy for in and in bred bees. I want bees for business, three striped, shade of color of no account. It is said by many that the pure Italian bee will seldom sting. My Italians are fully as cross as black bees. I have one very light colored colony nearly as cross as the hybrids. The fact that my bees are so very cross I believe to be the result of cross-breeding.

Query 6. Is it a fact or not that in and in breeding produces light colored peaceable bees, as a rule?

Query 7. As a rule, are in and in bred bees as good workers as cross bred bees, or are they not?

Questions for Novice.

1. Is not your success in honey gathering, due in part to your bees being crossed, hybridized, or graded? I infer they are from your ordering twenty-five queens of Mr. Grimm, and from what I have been told by a person who has seen them.

2. If you had purchased only one Italian queen bee and bred your whole stock from her and her progeny, and kept them strictly pure, would you not have got less honey?

Again, on page 173, American Bee Journal, Vol. VI., in answer to questions, you say—"We too have cross colonies, and gentle colonies, both pure, as we think. And so they remain as long as the queens live; and we do not know any remedy." Now

3. Do you know, or not, whether the cross colonies are the result of cross-breeding?

4. Do you know, or not, whether the gentle colonies are the result of in and in breeding? And

5. Whether the cross colonies are better workers than the peaceable colonies? If you do not know, please note these cases hereafter, and report.

Peninsula, Ohio. M. MILLER.

Latitude 41½ N., 22 miles south of Cleveland.

[For the American Bee Journal.]

Italians and Black Bees.

MR. EDITOR, and readers of the Journal.—We read much in the Bee Journal of the superiority of the Italian over the black bees. Several bee-keepers having large numbers of swarms of the two kinds in the same apiary, and with the same treatment, have given us the result of the comparison. With few exceptions the Italians have done the best, and much the best. This seems to be given for strong, if not full proof, in favor of the Italian variety. With the two kinds, as found in the above apiaries, we consider the evidence good, and in favor of the Italians. But how came they better? Is their superiority a *natural* quality, or is it only an improvement by the art and labor of man? Similar questions to these have been asked before. Please see July No. of Bee Journal, Vol. VI., page 17. With the very high appreciation of Italian bees, these questions have stood before the public from July to January, and are still unanswered. Where is Novice, Thomas, Grimm, Adair, Alley, and any number more of our great bee-men? Their silence on this question is strong presumptive evidence that it is simply *the improvement* that has made the Italians superior to our native black bees. Without any superiority on the part of the Italians there would be small sale for the queens, and hence the improvement.

Well, gentlemen, you have done a good deed, so far; one that has been a benefit to the public as well as yourselves. But more, I think, should be done. Now I think it well to try your hand at improving the black bees; and when you have raised these to as high a pitch as the others, probably a cross between the two kinds would produce a hybrid that would be superior to either kind.

When the same means have been used to improve the black bees that the Italians have received, then an equal number of swarms of the two kinds, in the same apiary, in the same kind of hives and with the same treatment, will give the true merits of each kind. Without a like improvement all comparisons are vain to show the *natural* qualifications of the kinds. I give it as my opinion that black bees are not naturally inferior to the Italians.

ALONZO BARNARD.

Bangor, Me., Jan. 1871.

[For the American Bee Journal.]

A Beginner's Experience with Bees.

MR. EDITOR:—I wish to give you some account of my progress in bee-keeping, but being young in years as well as in apiculture, I fear I may not be able to express myself as clearly as some of your older correspondents, though I will endeavor to make myself understood.

I commenced keeping bees in the spring of 1868, with five colonies of black bees in box hives, transferring them soon after into Langstroth movable comb hives, which, so far, I consider the best in use. I made eleven swarms from them, without any stimulating whatever, and Italianized one half of them the same year. Thus, you see, that we had no notion of keeping bees without having the Italians also. We now had sixteen colonies, which we soon found was overdoing the business, as none of them stored honey enough for its winter supply, although the Italians had the most, so that I felt like raising my hat for them. Though the blacks had equal chances with the Italians, they would have starved had we not taken some pains to save them. We bought seventy-five pounds of sugar and gave it to them, which carried them through the winter.

My bee-house is like that of H. M. Thomas, partly under ground. In the spring of 1869 when I took out my bees I found them all in poor condition, and lost three stocks, from various causes, after setting them out—thus reducing the number to thirteen. Yet, by a little stimulating, moving the frames apart and inserting empty combs in the centre, I soon had them very populous, and thought I might double their number. But having learned such a lesson the year before, I concluded to make only five artificial swarms, and make them pay for themselves. We did so, and obtained one thousand pounds of extracted honey, besides the five swarms, and Italianized all of them. They averaged fifty pounds each in weight. Now, I began to think myself something of a bee-ist. I wintered my stocks in the same house as the year before, and they came through in fine condition.

This season, 1870, has not been very favorable for bees, although I made fifteen swarms, and obtained one thousand pounds of surplus honey. The colonies averaged thirty pounds each, in the fall. Now, Mr. Editor, I do not want to count the chickens before they are hatched, but think I will take the plan of your correspondent, Novice, next season, who I don't think is quite such a novice as he styles himself.

My hybrid Italians are superior to my pure stocks in every respect, except their crossness. I have a plan in operation for keeping reserved queens, and if it proves to be of value, as I feel confident it will, I will report through the Journal. I intend also writing an article on in and in breeding, not in defiance of Mr. Briggs or any other man, but merely giving my own experience.

J. N. WALTER.

Winchester, Iowa.

[For the American Bee Journal.]

A Honey Extractor.

MR. EDITOR:—I have invented and made a honey extractor different from any that I have seen described in the Journal. I will give a brief description of it; but will first state that I use hives similar to Mr. Gallup's—the frames being the same as his, eleven inches, inside measure. My extractor consists of a couple of

tin boxes and a frame work to hold them. The frame and boxes are revolved upon a wooden upright spindle. The tin boxes are twelve inches long, seven wide, and sixteen deep. There are flanges on the ends of these boxes, to correspond with rabbetings in the hives. An empty frame covered with wire gauze on one side, forming it into a kind of screen, is suspended in each box; and the boxes are then suspended in the frame work, one at each end. The whole is then placed upon the spindle, after the manner of an old-fashioned pair of swifts, and is revolved by a pin four inches from the top bearing of the spindle in the frame work.

I place this extractor at the side of my hive; open the hive, and after brushing off the bees, at the entrance of the hive, from one of its well-filled combs, I put it in one of the tin boxes, placing thereon its tight-fitting cover. Then, when another comb is adjusted in the same manner, in the other box, the extractor is ready for operation, and a few revolutions of the machine throws out the honey nicely.

The advantages of this machine are its small cost—about four dollars; and doing its work well anywhere in the apiary.

I will here say that I believe myself to be the first inventor of this machine, and hereby give my claims free to all bee-keepers, as I shall not get any part patented. Those who may wish to make, and do not fully understand the above description, can address me by letter, with stamp.

JOHN L. DAVIS.

Delhi, Mich., Nov. 14, 1870.

[For the American Bee Journal.]

Blunders, and Mistaken Notions.

MR. EDITOR:—In a conversation last spring, with an old fogy friend, upon the physiology of the honey bee, he informed me with great earnestness, that the drone is the female bee, deposited the eggs, and is the mother of the colony—he "had cut them open, and found them full of eggs"—that if I would go home with him he could convince me of the truthfulness of his theory. Having several years since arrived at, I think, a correct knowledge of the matter in controversy, I did not go.

He may, in his immediate neighborhood mislead a few gaping, ignorant people; but that a Scientific Journal, with its thousands of readers, published too in the great commercial metropolis of our country, the centre of learning and knowledge, and purporting to give correct engravings of the different kinds of bees in a hive, should serve us with a very fair picture of the *drone* with the word *queen* printed underneath, is too bad. If the editor knows no more of bumps on a man's cranium, than about queen bees and drones, Phrenology will fool somebody. These *illustrations* are given in a communication by the Rev. Mr. Van Slyke, and I am satisfied the author is not in fault, as "*Life Illustrated*" must have stuck these bees in for grandeur.—Mistakes of this kind should not occur.

Sometime ago, I noticed going the rounds of the press, a very sympathetic account of the funeral of a bee. "Tenderly two bees bore the dead body of their comrade, some ten yards from the hive, placed the body head downward in a hole in the ground, and rolled against it two little stones, '*In Memoriam*,' and lingered there awhile, as if to drop a sympathizing tear," &c., &c.

Now all that is very nice on paper, and to the wonder-loving is a very readable article. There is something exquisitely touching in creatures so small, exhibiting so much regard for the dead; but the fact is some kind-hearted man saw two bees fly off with a dead one, and imagination saw the rest. Bees do carry off their dead—sometimes two carrying a dead one; but more frequently only one bears the burden. They fly from ten to forty yards from their home, and drop the dead while they fly. I have seen them bump the ground with their load, either from fatigue, or the wind bearing them down, when from the stun received they tarried awhile with their deceased comrade, not, I think through affection, or to perform any burial service, but to recover strength to return home. Sometimes bees, whose moments are but few, probably have an instinct of approaching dissolution, and leave the hive to die. Some that appeared to be sick and droopy, unable to fly, I have seen in the vicinity of their hive, and have picked them up and placed them near the entrance, sometimes in the hive, and they refused to stay, although no one was cross with or objected to their company. I have also seen wingless or deformed-winged bees, unable to fly, crawling on the ground near their homes, and returned them half a dozen times. They persistently refused to stay, but would crawl out, fall to the ground, and seemingly try to get as far away as possible. Either from choice, or in obedience to fixed laws, a sick or deformed worker remains in the hive only a short time. In the spring and summer, on examining hives, I have seen drones as well as workers, whose wings were crumped, but the length of their probation I never ascertained.

W. P. HENDERSON.

Murfreesboro', Tenn., Feb. 6, 1871.

[For the American Bee Journal.]

Doubts and Difficulties of a Beginner.

MR. EDITOR:—As I have formed a very pleasing acquaintance with the Journal and its contributors, it may be well for me to introduce myself. Ever since I can remember I have had a love for the industrious honey bee, to say nothing of the honey, which always agreed with me. From time to time, too, I have had the bee-fever some, so that I owned four hives in my life, but never kept any long enough to get any benefit from them, (unless it might be once, when I consigned some to the brimstone pit. But, ah, unlucky day, *they* cost more than they came to.)

This fall I borrowed two of the Journals, and truly brimstone is, or ought to be, of the past. I became a subscriber, and purchased seven

stocks of the common bee. They are in my cellar. I put a ventilator both in the north and in the south side of the cellar, made by nailing together four pieces of board, making an opening of about two inches each. This I close when the weather is cold. The bees are in four different kinds of hives. And this brings me to the very thing that puzzles me. I find most of your correspondents differ in some respects, so that a bee-keeper may take what seems to him to be the best, and go ahead making experiments, and if he does not succeed try some other plan; and thus test several plans in one season. This does well enough, where no patent interferes. But when we come to the hive question, we find people differ as much as in other things. Mr. Thomas thinks his hive is the best in the world; Mr. Alley knows his is the only one containing all the requisites of a good hive; Mr. Langstroth still maintains that he has the very best. Some think the Beebe hive is just what suits them; and others, with equal zeal, will contend for the Price hive; and so on to the end of the catalogue. Every one is affirmed to be the best by its special advocates. Now, I always thought it was *good*, BETTER, BEST! But whose is best? That's the question, at least for a beginner. That is what I am after. Who will decide this matter? I should be willing to leave it to the editor; but it is not his province to be umpire; but to hold an impartial scale between the contestants, whatever his private judgment may be. Then how shall I settle it? It will not do to buy a right from every patentee, and make a few hives of each kind to test them; for that would require a small fortune, or at least much beyond the profit of the bees; and I should grow some grayer than I now am before a satisfactory decision could be reached. So I say, down with the patent right business! Thousands of money worse than thrown away, because paid in the majority of cases to miserable lying whelps who are too lazy to get a living by work. I do not speak of the inventor. All praise to the man of genius. But let the Government pay them a suitable remuneration, and then let every one experiment on that which looks most sensible and promising. Now who will tell me what hive to use? If I could find one not patented, containing all the requisites of a good hive—cheapness and all, I would be pretty sure to try it.

Will some one tell me how much Alsike clover will sow an acre? Will it pay to raise pasturage for bees, in a timbered country, where there is plenty of basswood, elm, and hard maple?

But now I must certainly ask to be excused, for I have used more ink and paper than I at first designed.

H. F. PHELPS.

Pine Island, Minn.

The pollen gathered by the bees is of various colors, but the combs they construct are always of one color; and when newly made are pure white.

Bees extract sweets even from the most poisonous plants.

[For the American Bee Journal.]

Bees and Grapes.

I wish to know through the Journal, if bees have troubled grapes in any other locality, the past season. I think in this place nearly one-half the crop was destroyed by them. It was very dry when grapes began to ripen, and a shower of rain cracked open a great many of them, which gave the bees a taste; and as there was nothing else for them to work on, they nearly ruined the crop. I did not think they would touch the whole ones; but after once getting a taste, nothing would stop them. A good whole sound bunch could scarcely be found. Concord grapes were eaten the most. At first it was laid to the Italian bees, but in some places I noticed more black ones than Italians.

J. L. PEABODY.

Virden, Ill.

[For the American Bee Journal,]

Hiving Bees.

MR. EDITOR:—I read your Journal with much pleasure, and feel myself much benefited by it. I will say something about hiving bees, by a beginner. I was first called out to hive a very large swarm, and was rather timid in the operation. I thought I should without doubt be stung to death; however, I mustered up courage, took my hive, and went to work. I placed the hive directly under the cluster, and caught hold of the limb, and gave it a jerk. Down came the bees in a heap. I then took a stick and commenced trying to make them go in the hive; but the bees got too many for me, and I had to retreat in good order, "such order as it was." I thought it was nothing to hive a swarm of bees; yet I was a little backward about it anyway. But I have now learned how to handle bees, since I commenced reading the Journal. Some talk about woman's rights, &c.; you talk, thought I, I have had my rights and more than them.

A CURIOUS QUEEN BEE.

Can any one inform me what kind of queen this is? I will describe her. One evening, as I sat watching my bees, I saw a bee fly off that looked very much like a queen. In a few minutes it came back; I caught it and examined it; it proved to be to all appearance a queen, in shape, color, &c. It was like all other queens in shape, but it had the marks of a humble-bee. It was no larger than any other queen, but it was black as a crow and resembled a humble-bee. I let this queen go, and she went into the hive unmolested. Two days later, I saw two more in the same hive. I leave this for Mr. Gallup to unravel, for I think he will accommodate the ladies. "Let me hear from you my friends!"

A BEGINNER.

St. Louis, Mo.

[For the American Bee Journal.]

Comments and Rejoinder.

In reading the February number of the Journal I find many subjects that I would like to write about, but as I cannot take up all of them, I will only notice a few of the many. In the first place, I will take up a part of the article on page 192, on "HIVES AT THE NATIONAL CONVENTION." In said article will be found the following: "Take, for illustration, the Alley frame, ten inches wide and eighteen inches deep. Who cannot see that it is impossible to get a queen to breed in all parts of such a comb, when placed in a nucleus box?" (The Alley frame is 9 inches wide, and 17½ inches deep.) We never saw a comb of any size or shape that the queen would fill all parts with brood, when placed singly in a nucleus hive; and the queen will do it just as well in one comb as in another.

Here let us say that we do not raise queens in nucleus boxes with a single comb. Such hives will do to put queens in, to have them fertilized, but are worthless to raise queens in. What would a frame 9 by 9 inches be worth for a brood chamber to raise a stock of bees in? I have a lot of hives of this size of frame that I have thrown aside, because I had such poor luck in raising queens in them. None of the Bay State hives were on exhibition at the National Convention, to my knowledge.

On page 187, under "*Replies and Remarks*," I find the following: "But arrange the entrance as in the Alley hive, so that the frames run from side to side, and you will find it almost impossible to get the queen to breed in the rear combs; and in the Alley hives the rear combs are the last ones to be built. Swarms are almost invariably weaker, in numbers in such hives, in the fall than they are in hives with the natural arrangement of the comb." Now our experience has been just the reverse of this. Instead of the rear combs being the last ones to be built, we have, as a general thing, found them the first ones to be built in nine out of every ten hives that had bees put into them. And to the first reader of the Journal that comes into my yard, I will show a Bay State hive that had a swarm put into it late in June last. The rear combs in this hive are full and sealed from top to bottom with honey, while the two front frames are only about half filled, and contain no sealed honey.

The fact is, when a swarm of bees are put in a hive, they will cluster in some parts of the top—sometimes in a corner and sometimes in the middle; and just where they happen to cluster, there will they commence to build comb. The shape of the hive has nothing to do about the bees commencing to work in them. It is just where they cluster that comb-building is begun.

One of the best features of the Bay State hives is the fact that they are always strong in numbers in the fall, and one reason why they winter so well, is because the colony is strong when the winter sets in. I have always found that deep hives of any shape or style winter bees well, and always contain strong colonies.

I will challenge any man to produce a hive that will winter a stock of bees as well on their summer stand, or one that will produce more honey with the use of the extractor, or in large or small boxes, than can be got from the Bay State hive. I will send a Bay State Hive to any disinterested person to test, if other parties will do the same with their hives. They shall be thoroughly tested, and the result reported through the American Bee Journal. The person who undertakes the task of testing them, shall have the hives for his trouble. Who is ready to go in? If any can be found there is time to send the hives this season, and have bees put in them.

Now, we will reply to Mr. Quinby. I will give my ideas of foulbrood in a few words. I wish to be understood that in my opinion the quickest, surest, and cheapest way to get rid of foulbrood is to destroy the hive and contents at once. But if I had a hundred hives infected, I might be led to modify my views on this point, as I think as much of my bees as any man does of his. But if I had any number less than twenty-five, I would certainly pitch into them and clean out the disease at once. In my opinion Dr. Abbe will not cure foulbrood as he proposes, and if he should succeed, it might cost him as much in time and trouble, as it would to have destroyed them and purchase a new stock.

I do not believe in spending several years to cure a disease that can be cured in a few hours. Mr. Quinby has been ten or fifteen years in trying to accomplish what I did in two hours. If Dr. Abbe has got twenty stocks that he will cure of foulbrood, I would not take them as a gift, and would not have them in my apiary and run the risk of the disease breaking out, as it will certainly do sooner or later. This is my opinion about it.

Mr. Quinby admits that he has had the disease among his bees during the last ten or fifteen years, and he will have it for as many years to come. I have no doubt that he can check it in a measure; and so can Dr. Abbe; but to thoroughly eradicate the disease is another thing to accomplish.

H. ALLEY.

Wenham, Feb. 8, 1871.

[For the American Bee Journal.]

Bee Farming.

MR. EDITOR:—Among all the varied experience, as given by the many writers of the "Journal," I have seen but one on the above topic, and this one very imperfect in detail. In the advanced stage to which practical bee-culture has arrived, I think this one of the important points that we are neglecting. If, instead of a honey season of a few weeks, we could add as many months, the product of our hives would be in like proportion. No doubt there are more favored districts, where nature furnishes abundant pasturage for bees all summer. But those districts are the exception, not the rule.

In this vicinity, nine-tenths of all surplus honey is stored in from twenty to thirty days, from white clover. Having so short a season,

unless great care is taken to have the hives strong, and everything in readiness, the yield will be very small. Besides the season, short as it is, is liable to be too wet or too dry; and thus we have another cause of failure. But if the season could be prolonged three months, with pasturage equal to that furnished by the white clover, the amount of honey would be more than quadrupled, besides the increase of swarms. This fact needs no argument; it is self-evident to every bee-keeper.

There seems to be an opinion prevalent that it will not pay to cultivate plants for bee-pasturage alone; but that such plants as buckwheat, alsike clover, &c., must be cultivated, from which the farmer can get a crop that is valuable for other purposes—making his bee-pasturage a secondary object. And almost universally the honey crop is considered "small potatoes."

The alsike, blooming simultaneously with the white clover, makes it of little value to prolong the season. Buckwheat, for a honey crop, is a failure four times in five. The question then arises, will it pay to cultivate plants for the honey crop alone, and especially to prolong the season? The cost of hives and bees, the care and expense of wintering and spring feeding, are the same whether the yield is twenty pounds or two hundred pounds per hive. All the profit derived must be after the hive is made strong in stores, so that every pound gained by artificial pasturage is so much *net*. Let us figure, and see how bee-farming will compare with other farming—corn growing, &c. The average crop from a field of twenty acres, that I have planted in corn for three successive years, has been nearly fifty bushels per acre; average price per bushel, fifty-five cents.

Amount per acre	$27 50
Cost of raising and marketing . . .	11 70
Profit per acre	$15 80

The average yield, per acre, of corn in the State of Ohio, for 1869, was 27½ bushels per acre; while the average cost of production was, no doubt, less than in my own crop, and my profit per acre more than the average of the State.

The cost of sowing an acre of melilot clover, including the seed, is	$ 8 55
Affording pasturage for ten hives, yielding a surplus of 20 lbs. per hive—200 lbs. at 20 cents per pound	50 00
Profit per acre	$41 45

M. M. Baldridge states, that the melitot will yield from 300 to 500 lbs. per acre. R. Miller, by artificial pasturage, with 45 hives, old and young, averaged 52 lbs. per hive. He had three acres of melilot; but does not state what other amount of pasturage he had. (*Bee Journal*, vol. v., page 166). G. B. Avery thinks "that two acres of alsike would, in a good season, furnish honey sufficient for one hundred and fifty to two hundred colonies of bees. (*Bee Journal*, vol. iii., page 157).

The many reports of honey yield in the "*Journal*," will show that my estimate of 20 lbs. per hive is a low one; and I have no doubt, when once attention is called to it, that bee-keepers, with the aid of the melextractor and artificial combs, will show that my figures are the minimum instead of the maximum. There are very few farmers that realize $20 per acre off their farms, instead of $40. Besides, we have only begun to pay any attention to honey-plants—once there is a demand—flowering plants will be tried and tested, until we will have results superior to any yet realized, and "Novice's" vision of "miles of honey-jars," be a fact. Let every bee-keeper who has land, test some honey-plant, and give us the result in the "Journal," and soon would we have a volume of facts that would startle old fogies "in the baggage train." And now, if we are going to have artificial combs so cheap that Mr. Bickford "*dare* not tell," we want honey enough to fill them; and why not have it all in 1871?

A. L. BROWN.

London, Ohio, Jan., 1871.

P. S.—Do you think it would pay to cultivate the aster and the golden rod in this locality? Where could I obtain seed? Has the *Incarnat clover*, mentioned in the *Bee Journal*, vol. ii., page 234, and vol. iii., page 201, ever been tried in the United States?

[These plants would doubtless grow in Ohio; and, indeed, according to Gray, several varieties of each are native there, though it is not stated whether they are honey producing. Whether they could be cultivated for bee-pasturage with advantage, we do not know; but from their abundance around Washington, it is not unlikely they might. It would be difficult to procure seed now, care would be required to obtain it from the right kind of plants, as many varieties of each produce no honey—at least not on all soils.

We do not know that "Incarnat clover" has ever been tried in this country for bees, though it is a favorite for that purpose in some sections of Germany. It has been tried by farmers in Pennsylvania as a forage crop, but being an annual did not find favor.—ED]

[For the American Bee Journal.]

Hurrah for Figures!

MR. EDITOR:—In the February number Mr. Jasper Hazen has an article on the advantages of non-swarming hives. I think he has one or two errors in his calculations; and by a different mode of statement, I believe it has a very different appearance. I will take his data and calculate from them. And first take the *swarming hive.*

10 Colonies cost $5 each,	$50		
10 hives " $1 "	10	outlay	$60 00
Annual cost. Int. on $60, at			
7 per cent, ...	$4 20		
1/10 cost of hives, ...	1 00		
¼ " " bees, ...	12 50		
10 new hives, ...	10 00		
			27 70

Produce. 100 lbs. of honey at 25 cents, ...	$25 00	
100 swarms, at $5 each, .	50 00	
		$75 00
Net profit, ...		47 30
or for each hive, ...		4 73
Now take the *non-swarmers.*		
One colony cost, .	$5 00	
One hive, " .	6 00	
	$11 00	
Interest on $11.00, . . .	77	
$\frac{1}{10}$ cost of hive, ...	60	
$\frac{1}{4}$ " " swarm, . . .	1 25	
		2 62
Produce. 120 lbs. of honey, at 25 cents, ...		31 50
Net profit, ...		$28 88
or for 10 colonies, . . .		288 80
The swarmers give, . .		$47 30
" non-swarmers, . . .		288 80

This is an immense difference in favor of the latter. But carry out the calculation for ten years, and look at the result:

The 1st year the swarmer produces			1 swarm and	$4 73
" 2d " " " "			2 " "	9 46
" 3d " " " "			4 " "	18 92
" 4th " " " "			8 " "	37 84
" 5th " " " "			16 " "	75 68
" 6th " " " "			32 " "	151 36
" 7th " " " "			64 " "	302 72
" 8th " " " "			128 " "	605 44
" 9th " " " "			256 " "	1210 88
" 10th " " " "			512 " "	2421 76

And besides this, each year should have added to it the value of the new swarms, which is for the second year $10, for the third $20, and so on until the last year's produce should be $2421 76

And the value of 512 swarms at $5 each 250 000

$4981 76

Total produce of the non-swarmers, 10th year, ... 288 80

This is enough for me, as I expect to live twenty or thirty years longer, and will therefore make a few more swarms, while Mr. Hazen, being now over eighty, cannot look for many more years of life and may do better for himself on the non-swarming plan. H. W. S.

Feb. 1871.

[For the American Bee Journal.]

Using Hives Without Bottom Boards.

During swarming time last summer I was informed one day by the girl in attendance, that she had no more hives with bottoms, and no more bottom-boards on which a super hive could be set, to hive the swarms expected to come out that day. Being then away from home seven miles, it was too late that day to get the necessary hives, and I concluded to make an experiment by hiving all the swarms that came that day in hives without bottoms. In the course of the day four swarms issued, which united into three. We removed three of the stocks that had swarmed to new stands, and put a super hive without bottom on the old stand. These stands have an opening in the rear, 3¼ by 12 inches, and this large space was left open as an entrance for the bees. Of course I feared that the bees would lose much wax by having the cool night air coming in through so large an opening. But on repeated examinations, I found scarcely any scales of wax on the ground, and the swarms made remarkable progress in building comb and storing honey, more so than some swarms quite as strong which had been hived a number of days before. Two of those swarms filled their hives with nice combs and honey, and three ten pound boxes besides, for surplus; and the third gave fifty-five pounds of surplus box honey. This fact made it appear to me that, in hot weather, bees would do better in hives that could be cooled off by a large opening in the bottom. I will, however, experiment more largely on that point next summer.

Number of Yards and Feet Contained in Different Miles.

English Miles,	1760 yards,	or	5,280	feet.
Russian "	1100 "	"	3,300	"
Italian "	1467 "	"	4,401	"
Irish "	2200 "	"	6,600	"
French "	3668 "	"	11,004	"
Polish "	4400 "	"	13,200	"
German "	5866 "	"	17,598	"
Swedish & Danish	7233 "	"	21,699	"
Hungarian	8830 "	"	26,490	"

I copy the above table as I found it in our local paper a few days ago. It will, perhaps, serve to explain the mystery how so large a number of colonies of bees can be kept on a square mile in some parts of the old country. It will be seen that the Hungarian mile is the largest, the Swedish and Danish the next, and the German the third largest mile.

A. GRIMM.

Feb. 1871.

[For the American Bee Journal.

War in a Nucleus House! And other Items.

MR. EDITOR:—You occasionally want something to fill up your excellent Journal, therefore I will give you and its readers some of my last summer's experience:

On the first day of June last I formed four nucleus hives to raise young Italian queens. On the 23d of June, I watched one of these nuclei to see the young queen leave home to meet a drone. At two o'clock in the afternoon she came out, and off she went, four times in succession. The fourth time she returned, she showed signs of having met the drone. She entered the hive, but came out again immediately, with two worker bees after her. I heard her pipe twice, and then she re-entered the hive. I watched closely to see what would follow. In a few moments a bee came out, hobbling on its abdomen, and acting as though it was stung. More bees came out directly after, acting in the same man-

ner, and soon died. An hour before sunset, I opened the hive for examination, when I found all the bees engaged in fighting. They were nearly all clinched together in a perfect net. I blew a little smoke among them without much effect. I took the frames apart and found some balls of bees the size of a hen's egg, on the bottom of the hive. I then looked for the queen, and found her at the back end of the comb, unhurt, surrounded by a few working bees not engaged in fighting. I closed the hive again, and next morning re-opened it, and found that peace had been restored, but hundreds of bees were killed, though the queen still remained unharmed.

I account for the occurrence in this way: One portion of the workers was for killing the queen, while another portion a party was opposed to it, and they settled the controversy by war, the right prevailing in the end. I must say that I never saw the like before, nor heard of it in the history of the honey bee. The nucleus consisted of half a swarm of bees.

I see in the Journal that Mr. John M. Price condemns all artificial queen raising. He says, having failed with the theory of all other authors, he got up a new plan to get large and prolific queens, by giving the bees the swarming fever some way. Now I wish to ask Mr. Price what he would call such queen cells and queens raised in a hive where the bees swarmed out in the swarming season, without previously starting queen cells, leaving the bees remaining in the hive to construct queen cells afterwards? The question is whether such queen and queen cells were natural or non-natural? I had two swarms swarm out, when no queen cells were started.

I have raised queens since the year 1866, for my own use. I never started a nucleus yet, that did not raise its queen. I have lost some queens when they left the hive to meet a drone. I have followed Mr. Langstroth's and Mr. Dzierzon's directions for raising artificial queens; hence I think I understand their theory. I have queens that were raised in June, 1867, and were alive yet last fall, which would make them three years old last June. They are very large and handsome, and were raised from a Langstroth queen, for which I paid twenty dollars. Hence I shall keep them as long as they live.

Mr. Price says, in reply to Mr. Dadant, that a queen hatched from a grub three or four days old, would do to sell. Here, I think, Mr. Price is laboring under a mistake, as I have raised queens from grubs of the bees, choosing those that were *six* days old, so that the queens hatched on the tenth day, and they were very large and prolific. Dzierzon, the great German apiarian, says it makes no difference whether the bees choose an egg or a grub three or four days old. All the difference is, that if they choose the grub, the queens will hatch so many days sooner. I confirm that statement, swarming fever or no swarming fever. I have no artificial queens for sale.

H. ROSENSTIEL.

Lena, Ills., Feb. 6, 1871.

[For the American Bee Journal.]

Explanatory Jottings.

MR. EDITOR:—Allow us now to hit Novice a trifle, just to see what effect it will have. When we commenced to write for the American Bee Journal, we made the proposition to answer all inquiries, if the inquirers would simply enclose a stamp to prepay postage. We might answer those inquiries by simply saying *Yes* or *No*, to each. But our object was to give instruction, and such short answer would not benefit the querist. Therefore we choose to give the why and wherefore; and Novice will readily see that for a hard working farmer, this must necessarily take up much of his time, for which we receive nothing but the thanks of our correspondents, and the consciousness on our part of indeavoring to assist our fellow beings. (Here I will thank those inquirers who are ready and willing to pay for information, and have amply paid, &c.) We have been accused of doing this for notoriety. But, if we have become notorious, it was the very furthest thing from our intention when we commenced; therefore we do not consider ourselves as at all to blame. Our conscience is entirely clear on that head. If we write for other papers, it is with the assurance that we would only promise to do so during the long winter evenings, and only one article should be used in each number, if it was expected to make them hold out, &c. We do not remember giving any such instructions to the editor of the Journal, and hence he sometimes puts them in, in greater numbers, as long as they last, and then the stream runs dry. Thereupon we received private letters by the score, berating us for not writing more for the A. B. J. (Wonder whether they would be satisfied, providing we should devote our entire time, and occupy one-half of every number with our nonsense?) But we have a family to provide for and are not overburdened with greenbacks; consequently we could hardly devote more time to them, if we would. Now Mr. Novice, didn't you pile it on rather thick, when you said that we write "nary word for the old stand-by"? We think the February number shows that we have not forgotten "the old stand-by," by a long chalk.

On page 180, we should read "Even the crossest hybrids could be handled with impunity, *without* the use of smoke," instead of *with* the use of smoke. On page 192, article headed "Hives," &c., third line read "That were worthless," instead of "they were worthless." Take away or strip them all of the Langstroth features, and what would they look like? Echo answers—"what would they look like."

On the third and fourth of February, my two stocks that are on their summer stands, had a good fly. Those in the Diamond hive are wintering nicely, but something else is wanted in a hive, besides the wintering qualities. Those in the Alley hive are not wintering well. Others make the same complaint. I started on the sixth for Cincinnati. It is now snowing heavily from the north-east.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

An Explanation

Of R. B. Merrit's article on "TROUBLE AMONG BEES," Vol. VI., page 43.

A few years ago I made the same experience with a number of stocks of bees, that Mr. Merritt made. Nearly all the sealed brood was opened by the worker bees; some of them were still nearly all white; others had brownish heads, and a large number were seemingly ready to hatch, but could not get out of their cells. They were nearly all still in the same state three or four days later, and the younger bees also got ready to hatch. Then the older workers commenced biting the brood thus situated out of the combs, making large holes in the latter. On close examination I found large numbers of those young bees spun together at the tips of their abdomens, and unable to extricate themselves. Sometimes the old worker bees would drag out half a dozen of these unfortunate creatures, strung together in one lot. On closer examination. I found in some spots on the surface of such brood comb, moth-worms hidden in their galleries or passages of web. There were large ones and also small; and it appeared to me that those worms had hatched at the bottom of the cells, and gradually worked their way up to the surface. I then cut out a piece of such brood, and extracting a number of entangled bees, I found at the bottom of some cells as many as four small moth-worms, apparently about one-third grown. I found this state of things only in colonies that were very weak in the spring, and which when warm weather set in, had rapidly extended this brood-nest, and had thus probably covered up cells in which the miller had deposited large numbers of eggs. The old workers gradually cleaned out such combs, and rebuilt the damaged portions. The second set of brood then came out all right. Mr. Merritt would probably not have found that disease again in his swarm, if he had not put any combs in from other hives, that had very likely been visited by the miller. Since Italianizing my apiary, I found the same disease (if *disease* we may call it) only once more, and that in an artificial colony which had two frames of comb given to it, from a hive deserted by its swarm and which had remained without bees during the month of June. If the trouble referred to must be called a *disease*, I would designate it as the "worm disease." A. GRIMM.

Jefferson, Wis., Feb. 1871.

[For the American Bee Journal.]

Eighteen Hundred and Seventy.

The season here promised to be a very good one, the spring opening fair and warm, after an uncommonly mild, dry winter. The bees were in fine condition to take advantage of the fruit blossoms; the trees blooming in clear weather, for the first since I have kept bees; and before the white clover—our principal honey crop—bloomed, they had begun to work in the surplus boxes. But about the first of June a long spell of rain set in and continued until the end of the month, with but very few clear days, so that my bees got very little more than a week's work on white clover. Yet in that time they secured an average of about fifteen pounds of surplus honey to the hive—filling the boxes with comb enough to have stored sixty pounds. By the first of July intensely hot and dry weather set in and soon parched up everything. There was no honey gathered after that time, until the aster bloomed in September, which gave an abundance for winter, but no surplus, as it is very hard to get the bees to work in the boxes so late in the season.

I increased my stocks about one half, and got an average of twenty pounds of surplus honey per hive, leaving plenty for winter. This is about what I do every year. My neighbors always complain of "bad seasons, too wet or too dry, too hot or too cold," but I believe our climate is, on the whole, as good for bee-keeping as any in the country. Not that I am satisfied with the above results; but I am convinced that with all the "modern improvements" a much larger yield could be realized. If I had had a honey-extractor this year, as I fully intend to have next, I could have obtained at least one hundred pounds to the hive. During the week they worked on the white clover, the bees could evidently have gathered much more than they did, if they had had combs to hold it. They wasted much time during the greatest yield, in building comb, which the flow of honey did not last long enough to enable them to fill.—I have as yet seen no report of the use of the extractor in the South; but it is certainly just what we want, to enable us to take full advantage of the short seasons of abundant yield which occur several times in each summer. I am only afraid that I will not have time enough to extract all the honey my bees will give me, as I am in business in Baltimore, and leave home at eight in the morning and do not get back until five in the afternoon. Will Novice be kind enough to say how long it takes to empty the frames of a two-story Langstroth hive; and whether the honey will flow freely early in the morning and late in the evening, and oblige.

DANIEL M. WORTHINGTON.

St. Dennis, Md., Feb. 7, 1871.

[For the American Bee Journal.]

Amount of Honey to Winter a Colony of Bees.

Mr. EDITOR:—I have read a great deal of the experience of different beekeepers, in regard to the amount of honey required to winter a colony of bees and bring them out in good condition for the next season. Experience has taught me to prefer forty pounds, instead of twenty-five pounds for that purpose. The spring of 1870, proved this to be correct in this section of the country. The late frosts having destroyed the fruit blossoms to such an extent that the production of honey was very insignificant. The

honey dearth lasted till in June, when the white clover came into blossom. All my colonies that had from thirty-five to forty-five pounds of honey, when put into winter quarters the fall previous, did well for the season, giving swarms and surplus honey. But those having only from twenty-three to twenty-eight pounds at that time, had to be fed in April and May, to keep them from starving, as well as to keep them breeding; and they gave no swarms and no surplus honey. This would undoubtedly have been different, had the spring been a good honey season; but the case here was the reverse. Hence we had better be prepared for what may come, as we have not the ruling of the season. Then, in the spring, if the yield of honey comes plentiful, we can regulate the balance with the honey machine.

I am surprised to see still so many ninnies on bee-hive patents. In nine cases out of ten, these are moths of the most ravenous breed, or otherwise humbugs of the deepest dye. They can always be known by the stripes on the back—that is, by using some of the Langstroth claims, without deigning so much as to give him credit in the least for his invention. You may hear them at the fairs or some other public gathering, crying out MY PATENT hive, and loudly condemning the Langstroth hive, when at the same time every good point of their hive is pilfered from the Langstroth claims. There is so much of this sort of imposition carried on, that it is quite a drawback on the movable frame system. "But," says some one, "about so many will be humbugged any way, and it might as well be on bee-hives as on any thing else." Well, that might do if it did not affect so important a branch of business. Sometime hereafter I shall look after some of the other humbugs in this line. I have taken the Bee Journal for over three years, and expect to continue to take and read it as long as we both live, for I do not wish to be divorced from it.

H. W. W.

Mendota, Ills.

A writer in the North American Review, many years ago, asserted that bees sometimes suffered from dyspepsia; but from their sober and correct habits, it is presumable that they are exempt from gout and rheumatism.

THE AMERICAN BEE JOURNAL

Washington, March, 1871.

☞ The proceedings of the Cincinnati Convention occupy so much of our space this month, that many communications are again unavoidably omitted; as also the usual monthly correspondence of the Journal. If the honey receptacles of our friends be as well crammed next summer as our columns are likely to be crowded, there is a good time coming for those who have plenty of bees and know how to manage them skilfully.

☞ A meeting of the Michigan Bee-keepers' Association will be held at Lansing, on Thursday and Friday the 23d and 24th of this month. A large attendance and interesting discussions are expected.

☞ In reply to inquiries from several quarters, we would say that a person making or using a patented hive, or one any part or portion of which is patented, is liable to damages, if he has not bought or obtained the right of using such from the patentee or patentees. Making such hives for sale subjects the maker or vender, as well as the user to the penalties of infringement. Buying the right to use, make or sell a patented improvement of any patented hive, does not secure the right of making or using such part or portion of the hive as is covered by the original patent. However good or valuable the patented improvement may be, if it cannot be used except in connection with the patented article of which it is an improvement, it is indispensably necessary to procure a right or license from the original patentee also. Nor can the original patentee use, make, or sell the patented improvement, without compensating or obtaining a license from the patentee of such improvement. Each party has the sole control of his own particular invention, and is entitled to compensation for it if used; and third parties, purchasing from either, occupy precisely the position of the party from whom they purchase, or under whom they hold. This, of course, embraces also any further or subsequently patented improvement. Hives simply embodying infringements or evasions of an existing patent, confer no right whatever, but subject both vender and user to the penalties of the law.

The Baron of Rothschütz, at Pösendorff, near Laybach in Carniola, cultivates bees on an extensive scale. His apiary numbers more than five hundred colonies, under the superintendence of a manager, who attends to them exclusively from spring till fall, from dawn to dusk, supplying on an average fifteen fertilized queens daily during the season. He has 6,500 frames for his hives, of which 3,000 contain combs and honey. —The apiary is subdivided into seven departments. First, the honey department, with 100 movable comb double hives, to accommodate two hundred colonies, second, a stand with 203 colonies, which supply 606 small or nucleus stocks, furnishing bees to accompany queens sold; third, 250 colonies devoted to queen raising; fourth, 250 nucleus hives, to receive and hatch queen cells; fifth, a swarming stand, with 90 movable frame hives; sixth, a stand of thirty-six movable frame model or pattern hives, to supply the demand of customers promptly, and seventh, a stand of 120 provincial hives containing Carniolian bees, to supply those who desire to obtain full stocks of that race or variety of the honey bee in the peculiar hive used by the peasantry of the country.

[For the American Bee Journal.]

Experience with Italian Bees.

MR. EDITOR :—Like some of your correspondents, we will give an experience with Italian bees, though that experience may differ from that of others. When we commenced in the bee business it was a great mystery to us why some colonies would yield large profits, while others would yield scarcely any. Yet those non-productive colonies were, on an average, as strong as any. So far as brooding in the spring is concerned, as the honey season approached, the Italians were more inclined to fill up the brooding apartment with honey, thus of course retarding the production of brood at the most necessary time to produce workers for the ingathering of honey. The pure Italians were much more inclined to do this, than the hybrids and black bees, still we had no notion of disposing of the Italians. We keep bees for profit, and for that purpose give the preference to the hybrids. Perhaps our ill success with the Italians was caused by in and in breeding.

Mr. Gallup thinks the pure Italians are superior to all other bees. Mr. Fane, of Council Bluffs, prefers the hybrids. Both reside in the same State, Iowa. We will state the circumstances which led us to the opinion we have formed. We purchased a queen of Addison Johnson, of Pleasant Plain, Iowa, which proved to be one of the lightest colored queens we ever saw. We received this queen after black drones were bred in multitude. So we raised some drone brood from her, with the hope of obtaining pure Italians, as they were praised so much as being superior to all others. We raised some very nice striped workers. There were no Italian bees nearer than five miles. So, you see, this was in and in breeding. The queens of these non-productive colonies had mated with some near blood relation, which causes stupidity or dulness, or as the old German said, there is not much get-up about them. The queens that mated with black drones were the only profitable colonies we had in our apiary. One in particular, in the year 1869, gave us two hundred and nineteen pounds of extracted honey. Now if all pure Italians are like ours, we do not want them. As soon as we have all pure Italians in this country, we think they will not be as profitable as they were. Being a little cowardly we would not like to stir up a muss on this subject; and will therefore not proceed in the discussion, for fear we should get what we deserved, as friend Alley said when Mr. Briggs wrote his article on Italian bees!

J. N. WALTER.

Winchester, Iowa, Jan. 9, 1871.

[From the Western Rural.]

Alsike Clover.

(*Trifolium Hybridum*—Perennial.)

Having had many inquiries from farmers and others in regard to the honey and butter producing qualities of this vegetable, I will give through the columns of the WESTERN RURAL (by the way, a paper that every Western farmer should take and carefully read) my experience of three years, in regard to the great value of this plant, to all farmers whose soils are adapted to its full development. My own observations, and statements from other reliable sources, go far to prove its value.

Alsike clover is not adapted to light sandy, or sandy and gravelly soils, with porous or leach subsoils. With good clay subsoil, it succeeds better. But it luxualates in rich, thoroughly worked clay loam soils, rich bottom lands, prairie, and all marsh or swamp lands where they can be plowed so as to kill the wild grasses. Flowering through Winter and Spring does not injure it. Here it will accept the situation and display its magnificent products on the scale of five tons of finely cured hay to the acre. But mark! deeply stirred, rich, moist land, underdrained or sub-soiled, or both, will only produce this burden. The chemical action of plaster is strikingly manifest on this plant. Blossoms are developed more or less when the plant is from eight to ten inches in height; and when three and a half feet, it is a perfect sea of bloom.

Millions of dollars may be added to the wealth of this country, especially the West, in a few years by sowing one acre this year, and gradually extending its area. For soiling cows, horses, etc., when pastures fail, it is equal or superior to green corn, and attended with less trouble in the gathering and feeding. During the past year, I cut three crops from the same ground, standing at the first cutting from two to three feet in height; last cutting, one foot in height, as thick as it could stand, small, delicate stalks, with numerous branches, and perfectly glorified with a mass of small peach-blow colored blossoms, filling the air with the most delightful, and exhilarating perfume, and swarming with bees every fair day. The root is like red clover, but longer and more fibrous. The haulm is small, tender, and nutritious; when well cured as it should be, in full bloom, every spear will be eaten with avidity by all kinds of stock.

There is no plant known, that will produce so much good honey, butter, cheese, beef, mutton, wool, and hay per acre, as this plant, not even excepting corn. In using the latter for soiling, you get only the haulm, while in the Alsike you get the haulm and a large yield of honey; and if the ground is prepared as well by deep tilth, manure, and plaster, or other fertilizers, as for corn, you will get as much by weight of the haulm.

It bears feeding to an enormous degree. I think its fattening qualities superior to the famous blue-grass of Kentucky; and as it will flourish well on such soils as I have designated, from the Gulf to lake Superior, farmers can easily divine its immense advantage to their pockets. Beside, the expense of "seeding down" every three or four years is saved. It is a great renovator and disintegrator of hard, tenacious soils. Its long tap roots and numerous fibers reach deep for its pabulum, and thus loosen soil and endure drought well. Some think there are two kinds of this clover. I think not. The difference in growth, etc., in diverse localities, is owing to the character of the soil. I never saw any but the large kind on land once covered with beech, maple, oak, bass, lever wood, etc., and I never saw any but the small kind on light, sandy, and gravelly soils. Also on pebbly soils with calcarious debris, and good tenacious subsoil, it succeeds well. It is no humbug. Farmers, try it and report results. D. H.

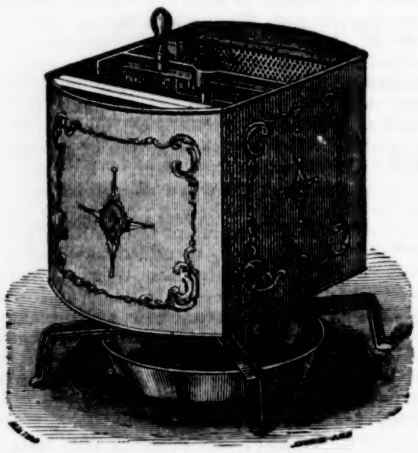
Shiawasse County, Mich.

HONEY EXTRACTOR.

I will sell for ten dollars ($10) the best, most convenient and durable, as well as the lightest HONEY EXTRACTOR now made.

H. ALLEY,
Wenham, Mass.

Dec. 1870—tf.



Peabody's Honey Extractor.

Bee-keepers desiring Honey Extractors would do well to send to the undersigned for Illustrated Circular before purchasing elsewhere. It contains testimonials from the most prominent Bee-keepers in the country who have the machine in use.

Price of Extractor including 2 knives.	$15.00
Knives sent by mail Post Paid.	1.25
" " " Express.	1.00

J. L. PEABODY,
Virden, Macoupin Co., Illinois.

Italian Queen Bees.

My health being partially restored, I expect to rear, for sale, this season, a limited number of

CHOICE ITALIAN QUEENS,

bred exclusively from imported queens, and fertilized if possible by drones from imported mothers.

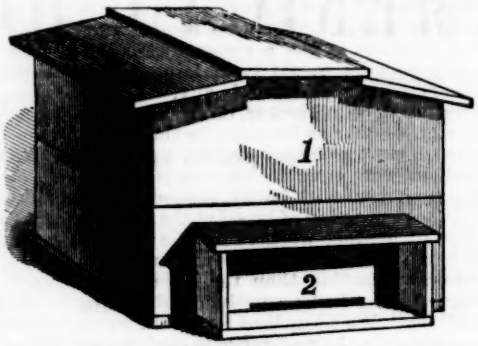
The price of such queens, when fully tested, by examining their hatching brood, in large nuclei or full fed stocks will be ten dollars. If sent before they are tested, five dollars.

For further particulars, send for circular.

L. L. LANGSTORTH,
Oxford, Butler Co., Ohio.

Feb. 1871—tf

ALLEY'S
BAY STATE BEE HIVE.



Bee-keepers in want of the BEST HIVE in use, cannot do better than to send for a sample of the

BAY STATE HIVE.

Hundreds of them are now in use. This hive exceeds all others yet introduced in the following respects :—

1st. One-third more honey can be taken from this hive, in boxes, or by the use of the extractor, than can be done by any other hive in use.

2d. It will winter a stock of bees better, on their summer stands, than any other hive possibly can in the best cellar or depository.

3d. It is better adapted to the wants of the bees and bee-keeper than any other hive extant.

4th. The surplus boxes are placed nearer the brood than they can be in any other hive.

5th. It has more room for surplus boxes; they are more easily removed; and the honey is stored in better marketable form. In fact, it is the *best and cheapest hive* in use, everything considered.

It needs no bee-house, summer or winter; and the bees will not "lay out" during hot weather, when the boxes are on.

For a full description, prices, &c., send stamp for my new circular.

H. ALLEY,
Wenham, Essex Co., Mass.

Nov. 1870—tf.

B E E S !

The New Circular of Quinby & Root, for 1871, is now ready. Contains prices of Italian Colonies, Queens, Hives, Boxes, Queen yards, Melextractors, Honey-knives, Bee-veils, &c. Send stamp to

QUINBY & ROOT,
St. Johnsville, N.Y.